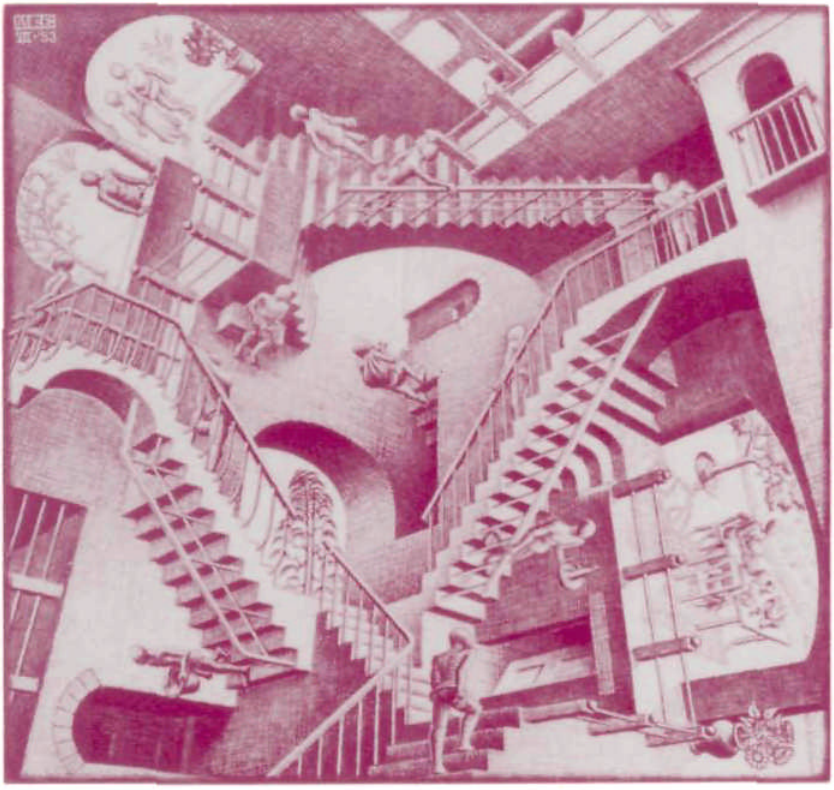
the Skeptical Inquirer

The Illogic of ESP



Self-Attribution in Astrology / Humanities vs. the Paranormal / Inside the Walton UFO Case / Aegean Ancient Astronauts / Parapsychologists' Beliefs

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THE ZETETIC

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News and Comment

Profiles of the Parapsychologists: Their Beliefs and Concerns

Scientists in general, and critics of paranormal claims in particular, are often criticized, undoubtedly with some justification, for failing to make distinctions between the responsible research done by parapsychologists and the typical wild claims about the paranormal put forth by self-proclaimed "psychics" and sensationalist writers in magazines and books and in the news media (often the supermarket tabloids). Parapsychology researchers contend that this association of their work with pseudoscientific approaches in the minds of the public and the critics has hurt them and their field of study.

Informed critics acknowledge that there is some validity to this concern. But they contend that some parapsychologists exploit the general public's credulousness about the paranormal and too often fail to criticize bad research (including that done within their own ranks) and unsubstantiated claims. And critics legitimately wonder what role parapsychologists' beliefs may play in their research.

For all these reasons it is important to understand something about the parapsychological community and its members' attitudes and beliefs in relation to the paranormal. Two interesting new surveys of the membership of the Parapsychological Association—the main professional organization of parapsychologists—have recently been completed. They provide some interesting information about parapsychologists' concerns and beliefs.

The first study was conducted by the Parapsychological Association itself and was recently distributed in summary form to the news media. The effort is part of an attempt by the PA to improve the public image of parapsychology and to present unsensationalized information about their research to the public. One hundred fifteen members of the PA were surveyed. This is less than half the total membership, but it includes, said the PA, those members who "generate most of the professionally published parapsychological research today." All but a few are Ph.D's or M.D.'s, it said. Responses were received from 80 of the 115 recipients.

One of the main concerns expressed was that serious research was difficult in a field "overrun with frauds, pseudoscientists, psychic entertainers, fortune tellers and the like," said the PA release. "Attracting a lion's share of the media's attention with their various

TABLE 1

ESP Belief Among Members of the Parapsychological Association By Type of Phenomena

Percentage of Respondents Who Believe Phenomenon to Have Been "Positively" or "Probably" Demonstrated

	U.S. and Canada %	Other %	Newer PA Members %	Older PA Members %
General ESP	88	88	74	92
Clairvoyance	85	76	53	92
Psychokinesis	81	76	53	88
Telepathy	79	76	47	88
Precognition	78	64	47	81
Survival	11	16	0	17

Data from the 1980 PA Survey of "professional" PA members.

claims and activities, these nonscientists have incurred an unflattering public image that responsible researchers in the field must counter." It quoted PA president-elect Irvin Child, a Yale psychology professor: "Serious-minded research attracts far less attention from the popular media than Uri Geller bending spoons, for example."

A majority of the respondents preferred to refer to their field of research as "parapsychology." Only 32 percent preferred "psi research," and fewer still preferred "psychical research" or "psychic-phenomena research." None preferred "consciousness research."

The most interesting part of the PA study dealt with members' views about the validity of the phenomena they investigate. Eighty-eight percent of the respondents from the United States and Canada considered the general ESP phenomenon to have been either "positively" or "probably" demonstrated. (The PA summary did not give separate figures for these two judgments.) The percentages were only slightly smaller for particular aspects of ESP having been positively or probably demonstrated: clairvoyance, 85 percent; psychokinesis, 81 percent; telepathy, 79 percent; and precognition, 78 percent. Only survival after death received a low rating, 11 percent.

The figures for members from other countries were about the same. But members who joined the PA in the past five years tended to be less believing (74 percent for general ESP) than persons who have been members longer than five years (92 percent). (See Table 1.)

The respondents were cautiously optimistic about the foreseeable future of parapsychological research. But only 18 percent thought it was now possible to formulate a list of criteria that would help an experimenter produce measurable psi phenomena upon demand, something that most critics consider necessary for the field to be considered

a real science.

The problem most often cited by PA members was the current lack of corroborative research—rigorous experiments whose results are replicated in more than one laboratory. Critics agree that this is a severe deficiency.

The second survey was reported by University of Pittsburgh biologist-parapsychologists R. A. McConnell and T. K. Clark in the *Journal of Parapsychology* (September 1980). The McConnell-Clark survey was conducted in mid-1975 but was not analyzed until 1980. All 241 members of the PA were sent the questionnaire (there were 254 members in 1980). Replies were received from 203, an 84 percent return.

There were 66 percent who held doctoral degrees; 11 percent, master's degrees; and most of the rest, bachelor's degrees or the equivalent. The degrees were in a broad range of subjects. Psychology was the largest single category, but nearly one-fourth of the degrees were in subjects other than the sciences (broadly construed) or philosophy.

McConnell and Clark asked the parapsychologists to rate their degree of belief in ESP as a percentage of "complete belief." They also tried to identify the main sources of belief by asking the respondents to apportion their percentage of belief among four categories of sources.

The belief in ESP was strong. Of the 203 respondents, 68 percent said they had complete (i.e. 100 percent) belief in the reality of ESP. And the degree of doubt was not very high among the remaining 32 percent: 22 percent of the total listed their belief in ESP in the 75 to 99 percent range (dubbed "strong" by McConnell); 8 percent, in the 26 to 74 percent range ("medium"); and only 2 percent, in the 1 to 25 percent range ("weak"). None expressed total disbelief. The average degree of belief in ESP was exceptionally high—93 percent. (See Table 2.)

As for their sources of belief, one-third attributed their belief to what McConnell and Clark termed *experiential* sources, with about half of these respondents having perceived spontaneous psi in themselves, and the other

TABLE 2

ESP Belief Among Members of the Parapsychological Association

By Degree of Belief

	Percent of Respondents
Complete belief (100%)	68
Strong (75-99%)	22
Moderate (26-74%)	8
Weak (1-25%)	2
None (0%)	0
Average degree of belief	93%

Data from the McConnell-Clark survey.

half, in persons close to them. The other two-thirds attributed their belief to what the authors dubbed "rational" sources; the number who gave the literature of psi as the source of their belief was twice the number who based their belief on their own experiments.

McConnell and Clark found that 57 percent of the responding members did not have a pro-ESP belief before they first read the published literature; that 48 percent experienced some mental conflict about their ESP beliefs; and that for 16 percent this conflict was not yet resolved at the time of the survey. This suggests to McConnell and Clark that "parapsychologists are not all the 'easy believers' that their critics tend to assume." The authors infer from their findings that joining the PA was an intellectual response either to what the respondents considered spontaneous psi or to the literature of parapsychology.

Observers may find much of interest in the survey data. In both surveys the level of belief in ESP was shown to be extraordinarily high—far higher than most critics would have expected. In the McConnell-Clark survey, it never dipped below 90 percent, regardless of how the respondents were categorized. In the PA's 1980 survey it was generally in the 70 or 80 percent range, except for judgments of specific ESP phenomena by new members.

It is not clear whether the somewhat lower figures in the PA survey are due to the fact that it queried only the more "professional" half of the PA membership, to the fact that the survey was made five years later than the McConnell-Clark study, or to differences in the surveying methods.

Nevertheless, the high level of belief in ESP by members of the Parapsychological Association belies the opinion sometimes heard that they are not *strong* believers. They contend, of course, that their belief is based on their close familiarity with the evidence or on their personal experience. It might be fair for critics to wonder, however, how these strongly committed parapsychologists are able to keep their beliefs from unconsciously affecting their research methodology in subtle, hard-to-identify ways. That is a difficult question in science, no matter what the subject. Conscious bias need not be implied.

It is also clear that the parapsychologists' perceptions about the degree to which ESP has been verified differ considerably from those of other scientists. A recent survey of the attitudes of college professors toward ESP (Wagner and Monnet, in the *Zetetic Scholar*, no. 5, 1979) found these judgments: ESP is an established fact, 16.3 percent; a likely possibility, 49.3 percent; merely an unknown, 10.9 percent; a remote possibility, 19.4 percent; an impossibility, 4.1 percent. That survey included academics in all fields. Among natural scientists, only 9.5 percent thought ESP was an established fact; 45.5 percent categorized it as a likely possibility.

But as psychologists Padgett, Benassi, and Singer pointed out in the Fall 1980 SKEPTICAL INQUIRER, academicians most familiar with the literature of parapsychology are psychologists, who are the most skeptical of all about parapsychology's claims. Only 5.5 percent of the psychologists in the Wagner and Monnet survey considered ESP "an established fact" and only 28.8 percent of them considered it even "a likely possibility." Padgett et al. believe this low esteem for the field's claims among psychologists comes from their familiarity with flaws in the parapsychology literature and from their understanding of the complex psychological factors influencing posi-

tive belief even in the absence of strong supporting evidence.

I know of no survey specifically directed toward informed critics of parapsychology, but it is interesting to note that the PA survey quotes physicist-parapsychologist Helmut Schmidt: "After my own experiments, I have no doubts about the reality of PK (psychokinesis)." In his article on Schmidt's work and the status of parapsychology in the Spring 1981 SKEPTICAL INQUIRER, University of Oregon psychologist Ray Hyman, certainly an informed and sympathetic critic, offered a somewhat different judgment. "The data so far produced by parapsychologists [including Schmidt] do not justify the claims for the existence of something called 'psi.'" Clearly the dispute about whether ESP does or does not exist will be with us for a long time to come.

—*Kendrick Frazier*

The Tamara Rand assassination-prediction hoax

The fortunately expeditious exposure of "psychic" Tamara Rand's Reagan-assassination-prediction hoax should serve as a vivid warning to the public—especially to television and radio talk-show producers—that things are seldom what they seem in the psychic-claims racket. This incident was similar to other dramatic claims of psychic prediction. It differed mainly in the callous quickness with which Rand managed to exploit the shooting of President Reagan (the bogus "prediction," claimed to have been made in January, was taped on March 31, the day after the assassination attempt), in the contempt the whole sordid effort showed for public sensibilities, and in the speed with which the hoax was exposed and publicized—within one day after she went public with the "prediction." The monetary stakes are enormous in the psychic-prediction business. Had her gambit worked, Rand would have been a sought-after celebrity rather than a notorious fraud. Everyone should now be more aware of the depths to which self-proclaimed "psychics" are prepared to stoop.

We plan to have a full report on the Rand hoax in a future issue.

—*K. F.*

The Enquirer libel judgment

It will be interesting to see whether Carol Burnett's successful $1.6 million libel judgment against the *National Enquirer* will affect that publication's equally outrageous and inaccurate "reporting" of the paranormal. The suits filed by Burnett and other aggrieved Hollywood celebrities may induce the tabloid to strive for a semblance of journalistic responsibility. But it is an equally likely possibility that we will see even more stories exploiting public credulity on paranormal matters, because in these kinds of sensational stories there is usually no individual victim who might cry "libel"—only the truth is routinely assaulted.

—*K.F.*

CSICOP cautions against use of police psychics

The Committee for the Scientific Investigation of Claims of the Paranormal has issued a statement urging police departments to be wary of accepting the claims of so-called "police psychics," or "psychic detectives." The statement was issued earlier this year after the spate of international publicity given one such self-proclaimed psychic, Dorothy Allison, during her whirlwind

tour of Atlanta during the investigation of the child murders in that city. On her arrival, she received attention on network-television newscasts and in front-page newspaper stories. She departed quietly after three days, having contributed nothing to the solution of the murders, but her name had become a household word. (Her visit to Atlanta was a side-trip in the midst of a national book-promotion tour.)

The Committee's statement pointed to some of the many failures of Allison and other police psychics, noting that police departments and the news media often accept psychics' claims of their abilities and successes with little or no independent investigation. In one case, for instance, Allison was asked to help find a missing 15-year-old boy in New Jersey. At the instigation of the local police, she paid three visits to his family's home. After questioning family members, she declared that the boy was dead. He would, she said, be found "near an airport." He was eventually found by a former teacher at a meeting of a group of Moonies in New York City, alive and well and far from any airport. Allison rationalized that she had been correct after all because New York's Pan Am Building was the site of a helicopter crash in 1977, when it was still being used as a helicopter pad, and that by joining the Moonies he was "spiritually dead." Family members accepted this reasoning.

Magician and psychic-claims investigator James Randi has investigated the techniques of police psychics. Their claims of success, he has found, depend upon the wide latitude allowed in their statements, broad generalities that can be interpreted in numerous ways, subsequent self-selection of data, and short memories on the part of the press and public for failures. The only controlled study of "police psychics," conducted by psychologists in the Los Angeles Police Department and published in the March 1979 *Journal of Police Science and Administration* (see *SI*, Summer 1979), found "psychic detectives" of no use in criminal investigations.

CSICOP's statement criticized the tendency to bring psychics and occult claimants into police investigations and legal proceedings. "Calling in the occult to assist in what should be serious, important work is a step back into the Middle Ages. It cannot be tolerated in today's enlightened world. When courts of law permit psychics to become officers of the court—as happened in Binghamton, N.Y.—to assist in the administration of law, and judges on the bench use astrology in deciding matters before them—as occurred in Cleveland, Ohio—we are throwing away centuries of progress and bringing witchcraft into our lives once more."

—*K.F.*

Moon madness at Science Digest

Science Digest continues to serve its readers science that no one can digest, particularly if one has no stomach for sensationalism, soft-headed speculation, and error. It is not that the magazine doesn't serve a large helping of good science reporting—it does. It's just that you have to be well versed in what you are reading to be able to separate fact from fantasy or downright fiction.

A piece in the March 1981 issue entitled "Moon Madness No Myth" reports that "growing scientific evidence strongly suggests that the moon actually does affect people, biologically as well as emotionally."

As its authority, *Science Digest*

quotes Ralph W. Morris, professor of pharmacology at the University of Illinois, who believes, the *Digest* says, that the "full moon seems to make humans do just about everything but howl at it." Included in his long list of effects the full moon has on us are increases in bleeding ulcers, attacks of angina pectoris, strokes, and epileptic convulsions, diabetes, and, of course—what any old wife could have told you—murder, arson, and other aggressive, criminal, or bizarre behavior.

Although studies that back up Morris's claims are mentioned, *Science Digest* neglects to tell us who did them and how they were conducted, with the exception of the one made by Morris himself on the nighttime activities of David Berkowitz. According to Morris, Berkowitz carried out his "Son of Sam" slayings on eight different nights—five of which had full moons. Morris's inaccuracy is enough to make one howl; none of the nights of the Berkowitz attacks had a full moon.* One night in question (July 31, 1977) came one day after the full moon and another came three days after. The rest were not even close.

Besides lacking accuracy, the *Digest* piece also lacks any mention of the studies that show the moon to have no influence on human behavior other than its effect on the imaginations of the gullible (see "The Moon and the Maternity Ward," *SI*, Summer 1979, and George Abell's review of *The Lunar Effect*, *SI*, Spring 1979).

The "Moon Madness" story clearly gives the impression that science has accepted this "lunacy" as a nearly established fact. One wonders if credulity also increases during the full moon. It might explain *Science Digest*'s lapses every month.

Scott DeGarmo, the editor of *Science Digest*, says his magazine seeks "stories that excite the imagination—stories that are on the leading edge of technology and the possible." The approach, he says, "is not soft-headed." DeGarmo is a likable man who appears to be genuinely interested in hearing from critics, pro and con. For those who believe that *Science Digest*'s reports on "Moon Madness," "Psychic Archaeology," and "Physicists Explain ESP" (see *SI*, Winter 1980-81) are nothing but "soft-headed," perhaps a letter will help persuade *Science Digest* to get off of junk-food-for-thought and onto a better, more wholesome diet.

—*Andrew Skolnick*

Andrew Skolnick graduated in June 1981 from the Columbia University Graduate School of Journalism, where he recently completed a study of media handling of the paranormal.

Psi claims from the Menninger Foundation

When the Menninger Foundation decides to look into the claims of out-of-body experiences (OOBEs) and concludes that 81 percent of the public have experienced such an event, it commands our attention. Further, the psychiatrists who conducted the tests said that OOBEs seem to be pleasant, rather than traumatic, and that, for a majority of the subjects, these experiences "increased their belief in life after death."

Following the release of a paper by T. G. Toftey, News Bureau Director for the Menninger Foundation in Topeka, Kansas, I contacted Dr. Glen Gabbard,

*Dates of the "Son of Sam" attacks: July 29, 1976; Oct. 23, 1976; Nov. 27, 1976; Jan. 30, 1977; Mar. 8, 1977; Apr. 17, 1977; June 26, 1977; July 31, 1977. Dates of relevant Full Moons: July 11, 1976; Oct. 7, 1976; Nov. 6, 1976; Feb. 3, 1977; March 5, 1977; April 11, 1977; June 30, 1977; July 30, 1977.

a staff psychiatrist who directed this research. He was enthusiastic about it. "Our study doesn't address whether something actually leaves the body," he said. "That's subjective and nearly impossible to prove ... Psychokinesis, clairvoyance, and telepathy could be used as explanations for the results, rather than OOBEs," he explained. He pointed out that there were tests made to try to pinpoint which of these phenomena explains OOBEs but that they were unsuccessful. He said he felt that telepathy has been "well proven and documented" in work done by Targ and Puthoff with Uri Geller at the Stanford Research Institute and in the Krippner-Ullman dream-telepathy studies. When I informed him of the serious doubt now cast on the SRI work and the fact that Krippner continues to support claims of a Philippine "psychic surgeon"—which Gabbard considered unsubstantiated—he promised to look further into his conclusions.

The Menninger release, issued as an official opinion of this prestigious organization, stated that, "out-of-body experiences are more common among the normal population than had been previously thought." I pointed out to Gabbard:

—The sample of 1,500 persons from which the information was obtained came as a result of a request in the *National Enquirer* asking for those who had *had* OOBE experiences to report.

—From those 1,500, only 420 were selected, since most had failed to make out their questionnaires correctly.

—Such a sample is bound to be a very biased group rather than one that is representative of the population as a whole.

—Therefore, the statement from the Foundation that they had discovered 81 percent of the population to have had OOBEs was presumptuous.

Gabbard agreed and, though he said he had reviewed this release, he admitted that this claim should be corrected.

The Menninger paper quoted Gabbard as saying: "The Russians ... are currently investigating to see if these experiences can be used for intelligence." Thus was raised, once more, the dreaded "psi-gap" ploy of the psientists, which is used to attempt to frighten the Department of Defense into further funding for their work. If Gabbard and his colleagues had looked further into the vain attempts of the parapsychology lobby to establish a quantum-mechanical basis for psi claims and their fanciful extrapolations of "phenomena" that were simple conjuring tricks, they might have thought better of lending their authority to such a paper, and the Menninger Foundation would have been spared embarrassment.

Gabbard did acknowledge, however, that he felt that claims of psychokinesis and clairvoyance "need further work" before he can accept them. Perhaps, after reviewing his work and pursuing the next aspect of the Menninger investigation—"a closer analysis of near-death experiences"—he will have a different sort of report to make for the Foundation.

—*James Randi*

Water witches' rationalizations

Dick Smith reports from Australia that my investigations of water diviners there, though definitive in scope and nature, brought only complaints from the dowsers, who lost the contest. I had offered a $10,000 prize to any successful performer, and Smith and others added to it until it came to $50,000. Even such a large amount failed to promote even one success.

Now, says Smith, all is explained. The dowsers have given five reasons that they failed:

1. Interference from the walkie-talkies being used.
2. Concealed magnets nearby.
3. Static charges on the plastic pipes.
4. The effect of money being offered.
5. A mysterious unknown and unnamed force.

What they fail to explain is that they *all* got positive results *when they knew* where the sought-after object (water, gold, etc.) was, but failed when they *did not know*. All the elements named above were present, if they existed, during both "open" and "blind" portions of the test.

And they are still wiggling sticks and waving pendula all over the continent of Australia.

—James Randi

Australian Skeptics group conducts first test

Australian Skeptics, the newly formed Australian section of CSICOP, met for the first time in January 1981 and is now in operation. The group's first investigation was to test the claims of a "psychic surgeon." The man was presented with a "patient," and his

AAA offers statement affirming evolution

Across the country, evolutionism is under attack by creationists demanding "equal time" for their views in the science classroom. President Reagan is on record supporting the equal-time argument of the creationists. Already fewer than half of public schools in the United States treat evolutionism in any detail, so even without creationist legislation evolution is not firmly entrenched in American education fifty-five years after the "Monkey Trial."

Teachers and school boards are under pressure to avoid controversy. Freedom to teach is often hostage to political pressures, and professional scientists have sometimes remained aloof from the fray, convinced the controversy was settled on the scientific evidence decades ago. But scientific societies are beginning to take the problem seriously. On December 5, 1980, for example, the American Anthropological Association overwhelmingly passed a resolution defending academic freedom and freedom of religion and offering the services of anthropologists to local schools embroiled in creation-evolution controversies. The full text follows.

> Whereas evolutionary theory is the indispensable foundation for the understanding of physical anthropology and biology;
>
> Whereas evolution is a basic component of many aspects of archaeology, cultural anthropology and linguistics;
>
> Whereas a century of scientific research has confirmed the reality of evolution as a historical process, and the concept of evolution, in all its diversity, has explained the scientifically known evidence and successfully predicted fruitful paths of further research; and

diagnosis was that she had problems that were due to her last childbirth and had suffered a long period of deafness. Actually, the "patient," a 73-year-old medical practitioner, had never had any children and has always enjoyed excellent hearing.

For its aims, Australian Skeptics has chosen the same statement of goals used by the parent CSICOP (published on the back cover of the SKEPTICAL INQUIRER). It plans to print a newsletter reporting its activities.

A group of Australians formed the section partly in response to the strong need for critical investigation of the many kinds of fringe-science and paranormal claims advanced in Australia, and in part it is an outgrowth of the interest stirred up by James Randi's visit to that country last summer. A total of $50,000 in prize money was put up for anyone who could prove a psychic phenomenon in Randi's presence. More than a hundred persons came forward to be tested for water divining, spoon bending, ESP, psychic photography, and metal detection by psychic means. All of them failed. Australian Skeptics will continue these kinds of tests.

The address of Australian Skeptics (Mark Plummer, co-chairman) is G.P.O. Box 1555 P, Melbourne 3001, Australia.

—*K.F.*

Whereas local and national campaigns by so-called scientific creationists and other antievolutionists nevertheless challenge the right of public schools to teach evolutionary theory without giving equal time to creationist and other antievolutionist explanations of the origin and development of life;

Be it moved that the American Anthropological Association affirms the necessity of teaching evolution as the best scientific explanation of human and nonhuman biology and the key to understanding the origin and development of life, because the principles of evolution have been tested repeatedly and found to be valid according to scientific criteria;

The Association respects the right of people to hold diverse religious beliefs, including those which reject evolution, as matters of theology or faith but not as tenets of secular science;

Efforts to require teaching creationism in science classes, whether exclusively, as a component of science curricula, or in equal-time counterpoint to evolution are not based on science but rather are attempts to promote unscientific viewpoints in the name of science without basis in the record of scientific research by generations of anthropologists and other scholars;

The subject of life origins is addressed in tremendous diversity among the world's religions, and efforts to promote particular Judeo-Christian creation accounts in public schools are ethnocentric as well as unscientific.

Be it further moved that the Association shall communicate this Motion upon passage to the public news media, to commissioners of education or equivalent officials in each of the fifty states, and to other officials and organizations deemed appropriate by the Executive Board or Executive Director.

Be it further moved that members of the Association are encouraged to promote these points of professional concern in their home communities among educators, parents, and students and in appropriate public forums beyond the boundaries of traditional professional and academic disciplines.

Psychic Vibrations

Paranormal healing and psychic surgery are by now old hat, but, lest you conclude that there is nothing new in the occult healing arts, let me bring *psychic dentistry* to your attention. A California occult magazine reports that "psychic dentist" Brother Willard Fuller has enabled thousands to "have their teeth healed through his worldwide ministry." Brother Fuller's talents have reportedly produced dental wonders such as "cavities filled with precious metals and porcelain fillings replaced by gold. Silver and porcelain dentures tightened, teeth straightened, new teeth grow." Prospective patients are requested to bring a flashlight, a mirror, and a ten-dollar donation.

* * * * *

To the ever-growing list of weird regions like the Bermuda Triangle, the Great Lakes Triangle, etc., now can be added yet another: "UFOs and monsters plague the 'Michigan Rectangle,'" reports the *Weekly World News*. Longtime paranormal researcher David Fideler reports that "there's a veritable hotbed of supernatural activity in the rectangle." Among the manifestations have been phantom panthers, airship sightings in 1897, UFOs, Bigfoot, mysterious explosions, and other unnatural things. Fideler, head of a group called Michigan Anomaly Research, speculates that the mysterious rectangle, which covers the extreme southwestern corner of the state from St. Joseph to Kalamazoo, may be "a gateway from the ordinary world to the supernatural, where unreality leaks into the ordinary everyday world."

* * * * *

Gregory Sandow, music critic for the *Village Voice*, observes in a letter to *Fate* magazine that the noted twentieth-century composer Karlheinz Stockhousen "once wrote a work that is supposed to be conducted telepathically." Sandow concedes, however, that "his visits to Sirius are new to me."

* * * * *

The skin magazine *Oui* reports in its December 1980 issue that "when researchers put pictures of naked women on the backs of ESP cards the percentage of correct hits improved dramatically." Independent verification was not available.

* * * * *

As the 1980-81 winter approached, the *National Examiner* carried the headline "Experts reveal winter heat wave may

cripple U.S." Winter temperatures in the east were supposed to soar "into the high 50's, melting all the snow away." Meanwhile, "residents of the West Coast will be washed out by torrential rains." Weather authorities cited were the *Old Farmer's Almanac*, the (not so old) *Farmer's Almanac*, and, of course, the woolly-bear caterpillars. In actuality, the East Coast suffered under bitter cold and snow, while the west was so dry that California forecasters began to speak of the possibility of impending drought.

* * * * *

You've been hearing all those stories about saucers that have allegedly crashed and are now stashed away by the U.S. government. Well, there are now *two* sets, not just one, of photos alleging to show the bodies of aliens in federal pickle jars. One set is being investigated by Leonard H. Stringfield, who is on the Board of Directors of MUFON, a major UFO group. The other is in the possession of the Coalition of Concerned UFOlogists, consisting of MARCEN, a rival of MUFON, and several UFO groups in Ohio. Stringfield, who has been a UFOlogist for more than thirty years, has in recent years waged a one-man campaign to gather evidence of supposedly authentic saucer crashes (see *SI*, Fall 1978, pp. 15-16). At the 1980 MUFON Conference in Houston, Stringfield announced that he had recently obtained eight photographs purportedly showing alien beings encased in liquid nitrogen in a glass enclosure. While admitting that he could not verify the authenticity of the photos, Stringfield said that corroborating information has been given him by at least 13 allegedly first-hand sources of evidence concerning UFO crashes. (MUFON official Richard Hall, with 20 years' experience in UFOlogy, writes: "I am shaken by the testimony [Stringfield] has obtained.")

But not long after Stringfield's talk Hall and others discovered that anonymous source of Stringfield's alien-body photos: they were first published by tabloid mogul Myron Fass in his sensationalist *Ancient Astronauts* magazine under the headline "Mummified Water-Breathing Aliens Discovered in Chicago Sewer!!!" (see *SI*, Spring-Summer 1978, p. 22). Nonetheless, even after learning of the disreputable origin of the photos, Stringfield told an Ohio UFO group that the photos appear to be genuine, speculated that perhaps the intelligence agencies are trying to discredit them, and described them as probably infrared photos of alien bodies encased in liquid nitrogen. (Stringfield and MUFON are pillars of the "scientific" UFO establishment.)

UFO exploiter Timothy Green Beckley says he was present when the hoax pictures were made. The Coalition has its own two photos, also from a source passionately insisting on anonymity. They show what appears to be the charred remains of something, but the object is so indistinct in the photos that it defies all identification. Some have suggested that the photos show the bodies of monkeys that were unwilling passengers in early V-2 rocket launches. In a recent publication, the Coalition argues against the monkey hypothesis, hinting that the photos may be authentic, but reaches no firm conclusion. Somehow the professional news hounds of the world have all managed to miss the story of the millennium.

* * * * *

Stephen Kaplan of the Vampire Research Center in Queens, New York City, estimates that there are 22 real-life vampires in the United States. While

Kaplan disavows belief in the supernatural, saying "everything that occurs has a natural explanation," he also observes that "the only real way to spot a vampire is to find a person who never seems to grow older. This is the secret of real vampires." Kaplan claims that vampires have lived for so many centuries and have amassed so much wealth that many of them hold key positions in the United States and other governments. (He declined, however, to name them.) "There is no doubt that some of these creatures need as much human blood as a pint a day," says Kaplan, adding that at least three vampires he has investigated have evidence to support claims that they are more than 300 years old. Vampires do not, however, sleep in coffins, he says, but use beds like everyone else does. Martin V. Riccardo, president of the Vampire Studies Society, based in suburban Chicago, agrees that "there is definitely something to the legends of the undead."

—*Robert Sheaffer*

ANNOUNCEMENT

We are happy to announce that a collection of many of the articles from the SKEPTICAL INQUIRER has now been published. The book contains 47 articles from past issues, through 1980, by contributors such as Ray Hyman (his classic on "cold reading"), Isaac Asimov, James Randi, Martin Gardner, Paul Kurtz, George Abell, Philip J. Klass, James Oberg, and nearly 40 other scientists, scholars, and investigators. Entitled *Paranormal Borderlands of Science*, the book (almost 500 pages) is divided into two sections: "Inquiries into Psi Phenomena" (critiques and essays concerning ESP, psychic claims, near-death experiences, biorhythms, etc.) and "Inquiries into Fringe-Science" (astrology, UFOs, ancient astronauts, Velikovskianism, cult archaeology, dowsing, etc.). We believe it makes lively reading and that it will be an indispensable reference source for all persons interested in honest, well-informed assessments of these matters. For SKEPTICAL INQUIRER subscribers, it is a handy, one-volume compilation of the most important articles published during our first four years.

Paranormal Borderlands of Science, edited by Kendrick Frazier, is published as a trade-sized paperback. It should be ordered directly from the publisher by sending a check for $12.95, plus $1.25 for postage and handling, to Prometheus Books, 700 E. Amherst St., Buffalo, NY 14215.

Investigation of "Psychics"

"Top Psychic" Hydrick: Puffery and Puffs

James Randi

Those of us who have regularly observed the wonders that ABC-TV has featured on its popular program "That's Incredible" expect that we will continue to see parlor tricks presented as genuine miracles. The public eats it up, and the sponsors are delighted. In December of 1980, when a man who called himself "Song Chai" appeared on this show, claptrap once again took on the guise of established fact.

This "Master of Martial Arts," as ABC presented him, turned out to be James Hydrick, a Salt Lake City ex-convict who apparently learned more in the pokey than how to make license plates. According to a gushing account in the February 3, 1981, issue of the *Star*, Rupert Murdoch's tabloid newspaper, the "World's Top Psychic" demonstrated psychokinetic (PK) powers of very strong magnitude, flipping the pages of a telephone book and causing a pencil to turn merely by the power of his will. Dr. H. Kimball, chief psychologist for Utah's Davis County Mental Health Commission (the *Star* incorrectly called him "Kimble"), was quoted as saying: "James [Hydrick] is indeed what he purports to be—a savant, or one who can order the mind to do things people believe to be impossible. His power is incredible and staggering." Kimball went on to say, reported the *Star*, that Hydrick could move objects "by mental telepathy," find hidden objects blindfolded, and do push-ups on one thumb. "James recently broke his hand, and just two days later X-rays showed the bone to be almost healed," Kimball was quoted as saying.

Hydrick has told several stories about his quest for superpowers. He has claimed Tibetan lamas, Chinese Kung-Fu masters, and various wandering monks as his gurus. He has now dropped the Song Chai name and is

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James Randi is a magician, a psychic-claims investigator, and an author. His most recent book, Flim-Flam!, *is reviewed in this issue.*

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just plain old James Hydrick, worker of wonders, master of martial arts, and healer—just your run-of-the-mill supernormal guy down the street.

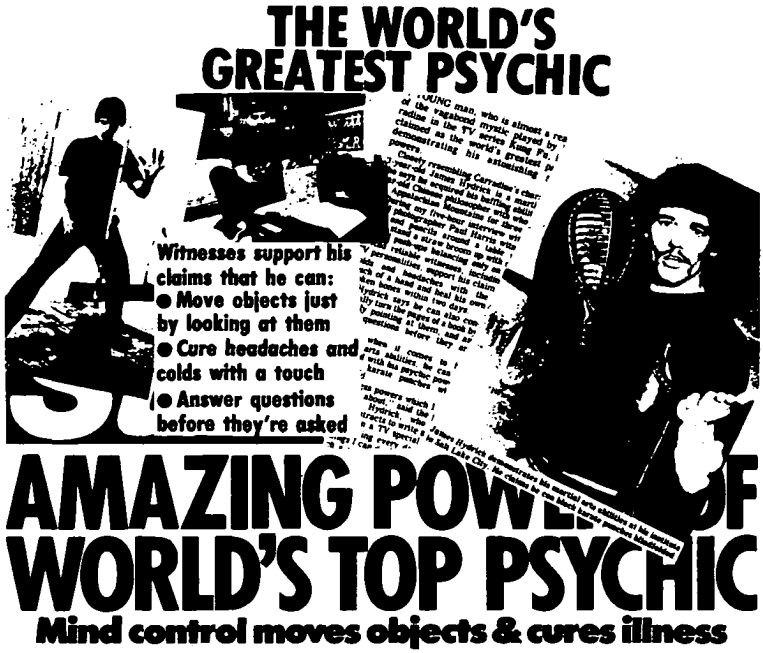
His appearance on ABC-TV was indeed "incredible." Host John Davidson doubted the pencil-turning trick, saying that Hydrick was merely blowing on the pencil to cause it to turn as it was lying balanced over the edge of a table. To prove the contrary, Hydrick asked Davidson to place his hand over his (Hydrick's) mouth and nose; the pencil still turned! There were no controls of any kind on the page-turning demonstration, and it was all swallowed whole by the staff, along with a trick using a pair of toothpicks. One toothpick was made to jump with apparently no motive force being applied. Davidson had the correct solution in this case, too. Said Davidson, "The other toothpick is moving!" But the two co-hosts were quick to deny this on Hydrick's behalf.

In the *Star*, a photo showed the "marvel" in which Hydrick "suspends a straw broom without touching it." Martin Gardner was in gales of laughter over this one, since both it and the toothpick trick appeared years ago in his book *The Encyclopedia of Impromptu Tricks*. They are what we magicians term "bar tricks." They are usually the stock-in-trade of those who have run out of funds for a beer at the local pub.

But what of the pencil and page tricks? Well, my jaundiced eye recognized these as rather tired old tricks that would not have made it into Gardner's book and which I first saw on the back of cereal boxes. Davidson was right not only on the toothpick trick, but on the others as well. Hydrick was simply blowing the page over, and he spun the pencil around by the same means. Not immediately evident are these facts, however: First, the blast of air from a half-open mouth takes time to get to the props, and Hydrick made sure he turned his head away from the pencil and the page after giving a sharp puff of air, so that he was facing *away* when the action occurred. Second, one blows not directly at the prop but at the table in front of it. The pencil reacts to even the slighest of breezes directed at the table surface. The page-turning requires much more air, but again it is directed at the space in front of the book, causing a flow of air along the table, up the inclined surface of the book and under the edge of the page, which must be "tweaked" up a bit to accept the blast and thus be turned over.

Hydrick is currently giving lessons to children, who do nothing but point at the book while Hydrick blows the pages over. They actually believe *they* are doing it!

Hydrick took me up on my offer of $10,000 for one paranormal demonstration under proper conditions of observation. We met on stage at the new TV show "That's My Line," where I had invited claimants to come and to try their skill. During a rehearsal the day before, I'd been in the control room while, unknown to Hydrick and his managers, the entire 90-minute practice session had been videotaped, with a highly sensitive microphone aimed and focused at Hydrick's mouth, and with the amplifier


THE WORLD'S GREATEST PSYCHIC
Witnesses support his claims that he can:
● Move objects just by looking at them
● Cure headaches and colds with a touch
● Answer questions before they're asked
AMAZING POWER OF WORLD'S TOP PSYCHIC
Mind control moves objects & cures illness

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turned up far beyond normal voice level. Not only did Hydrick perform as predicted, tweaking up the leading edge of the book and moving it into position each time, but we recorded monumental blasts of air every time the page moved or the pencil turned.

During the actual demonstration, Hydrick was allowed to perform each trick once without any controls; then he was required to submit to simple controls of my design. We called in John Palmer, a member of the Parapsychological Association, and two other scientists as judges of Hydrick's performance. They were to decide whether or not he would win my prize check, which was being held by Bob Barker, the show host, and was to be surrendered to the proper person at the close of the test.

As a control, I simply emptied a small can of styrofoam particles around the opened book. In this way, any blowing would show up as a massive movement of the particles. In case it was claimed that Hydrick's PK powers *also* moved the styrofoam, I was prepared to place a simple germ-mask on his face, which would in no way interfere with his breathing or his psychic functions but would prevent one thing—blowing. Not only did Hydrick fail to perform with the styrofoam particles in place, but he refused altogether to use the face mask. The judges were polled, and all agreed absoutely that Hydrick had failed to show them anything paranormal. The program was telecast on CBS on February 24, 1981.

You will recall that, even when Hydrick's mouth and nose were covered by Davidson on the "That's Incredible" show, the pencil had moved. I demonstrated that, when almost *any* movements were made near a carefully balanced pencil, it turned. Hydrick had made sharp karate movements that caused the pencil to turn—and Davidson fell for it.

But please recall that the *Star* had quoted from "one of America's best known and respected clinical psychologists, Dr. Heber Kimble [*sic*]." He had said all those wonderful things about Hydrick, remember? Well, in my stubborn way, I decided to call Dr. Kimball. He was aghast at what I read him from the *Star*, not being a reader of this high-class literature. He laughed at the quotes, and labeled them totally untrue. He had never endorsed Hydrick at all, he told me. The most he had said was that he saw him move a page, turn a pencil, and cause a plant to stir—by what means, he had no idea. Kimball claims no expertise in conjuring abilities or the detection of fraud. "I don't know if Hydrick has these powers, nor could I know unless I examined him under proper laboratory conditions," said Kimball. He had never commented on Hydrick's "self-healing" and knew nothing about what he had been quoted as saying. Kimball *had* seen Hydrick do the one-thumb push-up—an impressive sight, but hardly paranormal.

I have subsequently confirmed that Hydrick's ability to block karate blows while blindfolded is also a result of trickery—looking out the bottom of the blindfold to see the movements of his "attacker's" feet. According to karate experts who tested Hydrick in Provo, Utah, with this idea in mind they had the attacker punch without moving his feet; Hydrick failed to block the punch. When the attacker moved his feet as though he was punching but made no punch, Hydrick thrust up his hands to block it.

A credulous Associated Press article about Hydrick and his performances, by a reporter from AP's Salt Lake City bureau, mentioned—without noting the significance of the fact—that Hydrick had been interested in magic since he was ten years old. This naive eyewitness account of Hydrick's feats once again demonstrates that reporters—for all their professional journalistic skills—are untrained at detecting deception by tricksters claiming psychic powers.

Bear in mind that ABC-TV, the staff of the "That's Incredible" show and the producers, Alan Landsberg Productions, have all been aware of, and are currently very much aware of, the willingness of the Committee for the Scientific Investigation of Claims of the Paranormal to offer expert advice on these matters. They have not only declined to call on the Committee, but telegrams I sent to ABC-TV President Anthony Thomopoulis, to Landsberg, and to the TV show were ignored. The only comment I got from ABC-TV was through Eric Parham, ABC's New York publicist. He said that he "couldn't care less, personally, whether the stunts were authentic." He referred me to Landsberg Productions and to producer Woody Fraser. They never responded to my inquiries. ●

"Superpsychic" Vaughan: Claims vs. the Record

James Randi

New Ways of Consciousness is a San Francisco-based operation devoted to researching the paranormal. Its president, 44-year-old Alan Vaughan, now residing in Los Angeles, is the chain-smoking former editor of *Psychic Magazine* (currently known as *New Realities*) and a member of the Parapsychological Association. Vaughan is known as the Bay Area's leading psychic and predictor of events, as well as a possessor of psychokinetic (PK) powers.

When my longstanding offer of $10,000 for any successful performance of a paranormal nature under controlled conditions was noted in *Omni* (April 1980), Alan Vaughan sent a letter to publisher Bob Guccione demanding to be tested in the *Omni* offices in the presence of editor Ben Bova and other staffers. Guccione declined the opportunity, but Bova and senior editor Scot Morris reluctantly agreed to be witnesses.

Vaughan's claim was that he could determine, by general ESP sensing, in which one of ten plastic film canisters a ball-bearing was concealed. He said he would do it correctly at least five times in ten tries, and we set up a test using a random method for selecting the canister in

James Randi

"Psychic" Alan Vaughan as he was tested in the offices of *Omni*

which the steel ball would be placed. We met for the test on June 25.

By chance alone, without any of his awesome powers working, the probability of Vaughan fulfilling his claim of five or more "hits" was 1 in 612. Fairly good odds against which to place my prize, I felt. After ten attempts, Vaughan had scored zero. He attributed his failure to unfamiliar conditions, although before the test he had specifically declared, in writing, that he was confident of success, that my presence in the room would not inhibit him, that he was compatible with all present, and that he was feeling well enough to perform. I had insisted upon these statements' being agreed upon in advance to forestall the expected rationalizations.

I had agreed to test Vaughan again during a projected trip to California, and in August I was in the office of Richard Saltus, science writer for the *San Francisco Examiner*, to supervise round number two, my check again offered for success. This time we saw a score of one "hit" in twelve tries, still using the same ten canisters but with a much larger ball-bearing (13/16 of an inch in diameter). Again, he had failed. We planned to meet again in New York, again at the *Omni* offices, for yet a third test.

November 3 was the scheduled day. Vaughan sat down confidently before *Omni* judges while I waited outside the room at his request to avoid any "negative vibes." The test ground on to its conclusion, the performer seated before a row of plastic vials waving his hand over them mystically. The score this time was two out of twelve. Vaughan's reputation as a leading psychic was fading fast.

Meanwhile, I'd been looking into his other major claims. One was that he had demonstrated powerful PK abilities for John Jungerman at the University of California at Davis, using an inteferometer/laser device. Such a machine reacts to a force of as little as 10^{-13} watts exerted over a period of two minutes. This is an *extremely* small amount of force, and such a sensitive device is subject to all kinds of artifacts—external influences that can outperform the sought-after phenomena. Jungerman was dismayed at Vaughan's description of a "massive deflection" he said he had produced on the setup. Vaughan had arrived in the company of what Jungerman called a "small crowd," and the results were not at all convincing to the professor. "Alan was rather excited over it," he said, but we never did see anything that was above artifact background."

Vaughan also is said to be the leading prophet of momentous events in the United States. What of the ability? Well, in 1971, he told us that Nixon would be reelected for ending the Vietnam war and would have run against Muskie. Ted Kennedy would be president in 1976, he promised. The Reverend Philip Berrigan and Patty Hearst would be exonerated; Mt. Pelee would erupt in 1972, killing thousands; and J. Edgar Hoover would retire under White House pressure in the summer of 1971. Jackie Kennedy Onassis would again be widowed, "probably before the end of 1973." Even on rather likely events, he was wrong.

On January 1, 1980, Vaughan predicted that Ted Kennedy would not

oppose Carter in the convention race, that Ronald Reagan *would not even be a candidate*, and that Carter would win. Later that year, he was on record to declare that the Iran matter would end with the death of seven hostages, that they would all be put on trial, some being condemned to death, and that the U.S. Marines would rescue them. Shortly before that rescue, said Vaughan, Khomeini would be ousted from power. And, happily, he tells us that home mortgage rates will go down to 10 percent in 1981 and that the auto industry will make a strong recovery. We can all hope that these latter two prognostications are somewhat more accurate than the others.

With the 46 predictions Vaughan made in three widely circulated newspaper articles (the only ones that have come to my attention), he scored:

Totally wrong	26
Right	0
Vague, not determinable	14
Not yet determinable	6

Where, one is bound to ask, does Alan Vaughan get his reputation as a superpsychic? Obviously, it arises from the failure of the press and the public to follow up on his performances, from his dedicated rationalizations of failures, and from the value assigned to anecdotal accounts of "miracles." Put to the test, he fails. And that is in spite of his signed statement that the tests are fair and proper. ●

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ESP: A Conceptual Analysis

Target-guessing experiments make no case for ESP. This is a matter of logic, not empirical deficiency.

Sidney Gendin

I have two aims. First, I want to explain why, as a philosopher, I find nothing impressive in any of the ESP literature that concerns target-guessing experiments. Second, I hope to make plausible the view that some sorts of parapsychological phenomena cannot be taken seriously at all—hence there is not much point in evaluating the experiments or the putative evidence these experiments produce.

My skepticism about these target-guessing experiments has little to do with suspicions about the adequacy of experimental controls or with worries about the possibility of fraud. The problem is more fundamental than that. Typical target-guessing experiments, such as those that make use of Zener cards or their equivalent, simply don't do anything to establish ESP; and this, it seems to me, is a matter of logic and not one of mere empirical deficiency. Much of what I have to say is taken up with explaining and defending this thesis.

I shall confine the discussion to the experimental literature. Frankly, the anecdotal literature is much more interesting but, unfortunately, it is hard to give credence to any of the amazing tales. It is not only that it is wise not to put trust in stories told by others but that it is wise not to put trust in strange experiences even if they are one's own. Indeed, it is positively egotistical in the extreme to suppose that what is wrong with the anecdotes is that they are always someone else's. On the other hand, I certainly reject the notion that scientists have some peculiar competence to investigate anecdotes after the fact with the alleged aim of confirming or disconfirm-

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ing them. In no university, at least on this planet, is any such course offered as "Physics 200: The Fundamentals of Fraud." Nor do scientists take any course called "Specialized Techniques for Discovering Alternative Explanations." Of course every scientist who understands the logic of explanation realizes that for any phenomenon there is more than one possible explanation. But no scientist learns as part of his formal education how, say, to examine ceilings so as to be able to figure out how it rained through an apparently sound ceiling. A roofer would have much more competence.

I

There is a limit to the use of statistics. For example, no amount of underrepresentation of a minority group in a given industry could establish even a weak case for racial discrimination unless we already had some independent reasons for thinking there is a phenomenon of racial discrimination. Of course we do have reasons. But suppose, reader, that you yourself were completely free of any bigotry, had never met a bigot, had never even heard of such things as racial jokes. Moreover, suppose that the history of Jews and blacks and others were entirely different and that you could not point to a single instance of demonstrated discrimination or prejudice. What would you then make of underrepresentation? Imagine that someone were to maintain that the underrepresentation established a case, at least a weak case, for the following: many black people are frightened off from applying for jobs in the industry by leprechauns who threaten to kill them and who further threaten to kill them if they reveal the first threat. I take it that it is uncontroversial that underrepresentation does not make even a weak case for this bizarre hypothesis.

I am not claiming that it is because we have never seen leprechauns that they make a bad explanation. Rather, we have no reasons over and above the underrepresentation to believe in them. Physicists postulate the existence of certain sub-microscopic events as the best explanation for certain macrolevel events, and we do not balk at that. What makes them the best is their predictive power and their power to explain data beyond those for which they were originally postulated. All this is well known. I am claiming that *mere* statistics do not make ESP a rational explanation for certain surprising happenings any more than mere statistics could make discrimination a rational explanation for underrepresentation.

Consider the case where ESP investigators performed experiments and got results for which they claimed, "The odds against this happening by chance are ... [something astronomically high]." Even if these experiments are flawless and the statistical analyses are correct, they do not go the slightest way toward establishing that the results were due to ESP, unless we have independent reasons to suppose there is such a thing as ESP.

Now many researchers, following a suggestion by Thouless,[1] have

dispensed with the terminology of ESP and prefer to talk about psi phenomena. The intent is to adopt an umbrella term that signifies only that something interesting is going on and not the specific nature(s) of these goings-on. This shows admirable restraint, but if "psi" is only a label for "statistically interesting results" then it is not used to pick out any phenomenon at all, much less to pick out any process for explaining any phenomenon.

In using "psi" as a label for an expression like "whatever it is that is going on," we should keep in mind the distinction between the attributive and referential uses of terms. For example, if the police are interested in catching *the man who committed the crime* but haven't the foggiest idea who did commit the crime, then we are using the expression in its attributive sense. But if a policeman says to his partner, "Look, there's *the man who committed the crime*!" then the policeman is using the expression referentially. Now, if psi is understood as merely whatever it is that causes interesting results, then it does not constitute any kind of explanation. Hence it isn't even a weak competitor with other explanations. I am not saying that attributive expressions never figure in genuine explanations (although that is arguable), but certainly this particular type of attributive expression is no kind of explanation—not even a bad kind.

I prefer such terms as *ESP* and its various species: telepathy, clairvoyance, precognition, and psychokinesis. If nothing else, these are labels for certain alleged kinds of phenomena. But considered as processes, we know nothing about their machinery. This, of course, is the very point of adopting the term *psi*. Naturally there are many speculations about how they might operate, but here I rely on Gauld's excellent review explaining the failure of every presumptive model.[2]

It is with astonishment (and a certain degree of despondency) that I read John Beloff's claim that a good experiment should produce a scoring rate at such a high level as to "exclude any counter-explanation."[3] What could such a level be? A score of 100 percent is certainly not high enough, for that would at best establish "something interesting is going on." Even if we had reason to believe in ESP, why should we suppose that a very high level of scoring would exclude any counterexplanation? Suppose we had reason to believe both in racial discrimination and in vicious leprechauns. What degree of underrepresentation (in our previous example) best fits each hypothesis? Clearly we need auxiliary hypotheses, but given that we don't know how ESP is supposed to work it isn't clear why we should be more favorably disposed to ESP as the true explanation of a high scoring rate than to some other explanation.

Suppose we grant for the sake of argument that target-guessing experiments have shown there are phenomena worth investigating. And suppose it is claimed that these experiments prove at least a prima facie case for ESP in one or more of its forms as the process accounting for the interesting statistical results. Can we move beyond a prima facie case to a

real one? Only if certain conditions are met. For surely many other supernatural and paranormal non-ESP hypotheses may be concocted to account for the interesting results. It doesn't matter in the slightest that we have no reason to believe in these things, because in that regard they are on all fours along with ESP. So long as they are the kind of things that, *if* they existed, could account for the results, then the results are as much prima facie evidence for any of them as for ESP. Only if we have independent evidence for our favored alternative can we justifiably take the statistics as *further* evidence for it and not for them.

I emphasize that I am discussing ESP in particular and not the paranormal in general. ESP is a subset of the set of alleged paranormal phenomena (vampires, UFOs, etc.), and one need not admit there is any specific evidence for ESP over and above whatever the evidence is for there being something paranormal. But even to concede the existence of the paranormal is to concede quite a lot. So it is time to address ourselves directly to the question of whether something interesting is actually going on in any of the target-guessing experiments.

II

Sometimes, when certain events are extremely unlikely to have happened by chance, we conclude that they didn't happen by chance. Other times, we conclude only that "the odds against this having happened by chance are ..." and we leave it at that. This is to be explained, I think, by the relative differences in our knowledge concerning how the phenomena work. For example, if we learn that a man has run the mile in 3 minutes 48 seconds, we conclude without further ado that he is a serious runner. We could put our conclusion more modestly: "The odds against this having been a lucky performance by an obese nonrunner are quite high," but this is carrying philosophic caution to a ludicrous extreme.

Imagine that from a deck of one thousand cards, no two of which are alike, I predict correctly the card I will draw. The chances of doing so are, naturally, only one in a thousand. Nevertheless, the most reasonable conclusion after this has happened is that I was lucky. Despite the improbability of my making a correct hit by chance, we conclude that probably it was due to chance. This is extremely important because it shows that we not only believe that events that are very unlikely are bound to happen from time to time but that we also believe that sometimes chance is the best explanation. However, to admit that X has happened by chance is to admit it probably won't happen again. Suppose we run the card experiment ten more times. This will increase the improbability of making all correct hits. But it also does something more—it provides confirmation for a claim of having an extraordinary ability. The repetition of success must have some force over and above its effects on probability, otherwise we would never have to abandon the hypotheses of luck.

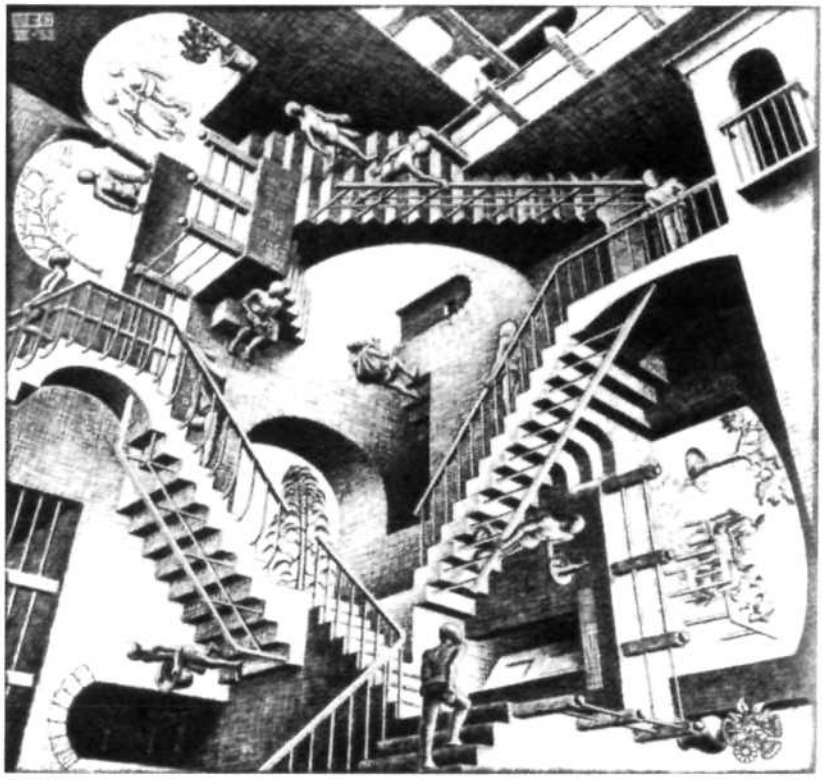
Consider the fact that there must be some number of cards such that one hit from that enormous deck is of equal improbability to ten hits from a deck of one thousand. *If* the most plausible explanation of the correct hit from the enormous deck is luck and if there was nothing else but an extraordinary improbability to reckon with in the case of the ten consecutive hits from the deck of one thousand, then, given that the improbabilities are the same for the two cases, I should take the same view of the ten consecutive hits as I do of the single hit from the enormous deck. In truth, however, I would be loath to bet against the person who has just made ten hits in a row, and so the repetition of his successes does seem to have a force over and above its effect on probability. And this is just the force of confirmation. But what counts as confirmation? In the example of the ten consecutive hits we clearly have a repetition of successes, but we settle for something much less if we also count as successes repetitions of experiments that yield only results contrary to what is expectable by chance.

Suppose a subject has correctly guessed the outcome of coin-tossing 51 percent of the time in each of six experiments given at three-month intervals. Since each of these "successes" is itself a matter for debate, the repetitions add nothing of value. (To think otherwise would be thinking that six dubious arguments for the existence of Santa Claus are better than one.) We ought simply to total up the sum of the subject's guesses and calculate the chances of correctly guessing 51 percent of that total. If the odds against getting 51 percent right from that grand total are enormous then we should note it, but we still can't rule chance out unless, as in the case of the runner, we have sufficient background knowledge to do so.

For ESP to be a stronger contender than chance we need to know what degree of scoring success it ought to yield. Should a person with clairvoyance predict coin tosses with 100 percent accuracy or with 51 percent accuracy? Without this knowledge, ESP is only an ad hoc hypothesis of the lucky average. But which hypothesis is preferable? The lucky-run hypothesis—because it is an instance of a phenomenon we already have independent reasons for believing in.

III

Some ESP researchers want to leave open the possibility that the "extra" in "extrasensory" refers not to some mysterious abilities beyond the perceptual but to some as yet unknown perceptual apparatus. However, if we are to take this possibility seriously, then we must bring to bear all our background knowledge concerning the nature of perception. We can characterize ESP as a form of perception only if it shares the salient characteristics of other forms of perception. This fact creates another problem about the statistical anomalies. Since perceptions in good working order are paradigmatically sources of correct information, it follows that *if* ESP is a form of perception then we ought not to take strong



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negative correlations between hits and guesses as evidence of an ESP ability. Perceptions do not work by leading us consistently to error.

Perceptions are not merely sources of belief but are the means by which we confirm beliefs. There are reports of people who "perceive" colors through sensations in their fingertips, regardless of the tactile qualities of the surfaces they are feeling. How, if at all, do they confirm their claims? Presumably by looking and seeing that their beliefs are correct. It is never the other way around. People who see that a surface is red do not confirm their perceptions by shutting their eyes and testing the object with their fingertips. Different phenomena are the prerogatives of different senses. This is a logical matter, not an empirical one. (I do not mean that it is a logical matter that the eyes be the seat of vision.) There are no phenomena that are the prerogatives of ESP. That is, there are no phenomena for which an ESP experience is the ultimate court of appeal. Given a dispute about whether an object in the distance is crayon or chalk, it is inconceivable that the ultimate determiner might be some ESP experience.

In philosophic circles, it is a fairly commonly accepted notion that

knowledge is to be analyzed as, at the very least, justified true belief. Since normal perceptions confirm beliefs, they typically do yield knowledge. However, ESP does not provide confirmation but only the experiences that stand in the need of confirmation. Accordingly, at best, ESP yields true beliefs. In the Zener card test, any subject who consistently averaged 9 hits out of 25 over a very long haul would be regarded as extraordinary, but *by definition*, a person cannot be said *to know* what cards are coming up if he goes wrong more often than he goes right—which is the case for anyone who averages less than 13 hits out of 25. In every standard multiple target-guessing experiment known to me, "good subjects" generally go wrong far more often than they go right. Hence ESP cannot be regarded as a form of perception.

Suppose, then, that in this context "perception" is just a figure of speech and that it is not a model for ESP. So it may be said that we have no idea how a good subject should score. We have no idea whether a coin-guesser should score about 52 percent or 100 percent or even whether negative correlations count as good evidence. But, if this is true, it still isn't clear why ESP researchers should put the onus on the skeptic by asking, "How do *you* explain this result when the odds are ten million to one against its happening by chance?" Rather, the ESP researcher should formulate some plausible hypothesis about the modus operandi of ESP in order to explain intelligibly why every good subject is wrong far more often than right. Instead, after 50 years, we have not progressed beyond tedious target-guessing and statistical analysis. The only change has been in the sophistication (and cost) of the equipment.

I am prepared to accept the idea that the "perception" in "extra-sensory perception" is a figure of speech and that, for all I know, if there is ESP, then a person who had it would be right in about 52 percent of his guesses of ten thousand coin-tosses. Still, there is no reason we know of antecedently to take 52 percent as solid evidence and, say, 59 percent as evidence of fraud. For all we know, 52 percent is compatible with second-rate fraud. To date, we have no reason to take any statistical result as peculiarly well suited to the ESP hypothesis.

IV

I want now to say something about such phenomena as precognition, psychokinesis, and disembodied survival after death. To begin with, let us consider the matter of disembodied survival after death. Some ESP researchers seem to think all that is at issue is whether it is true that we, or some of us, survive death. But some philosophers have offered penetrating arguments for the proposition that disembodied survival is conceptually impossible. If A asks B to keep an open mind as to the possibility that X exists, this request can make sense to B only if he regards X as conceptually possible. If A knows that B has an argument against this possibility, then

A's asking B to keep an open mind and to take a look at the evidence shows that A is confused about the nature of philosophical analysis. This point also applies to other kinds of analysis. For example, if some mathematicians think they have a proof that an angle cannot be trisected with compass and straightedge alone, then it is pointless for them to examine someone's claim that he has succeeded in performing the trisection.

Certainly the complexities of the issues surrounding disembodied survival preclude the likelihood of a knock-down, drag-out proof of impossibility in the way that there can be for the mathematical case. Still, the way to counter the philosophical analysis is not dissimilar to the way one counters a mathematical analysis—by finding error with the analysis. Presumably the person who thinks disembodied survival is impossible has already considered what would count as evidence against his thesis by reflecting on hypothetical examples. Very likely the kinds of examples he will have considered are more powerful than any evidence actually mustered by those who believe in disembodied survival. If the skeptic thinks he has a good way to handle his own hypothetical counterexamples, then he hardly has any reason to examine the less powerful examples that the believer has to offer.

Empirical evidence of precognition does not, in the opinion of many philosophers, fare any better than evidence for survival. *If* precognition involves the idea that future events determine present events, then precognition is logically impossible. At any rate, there are many good arguments that causes cannot follow their effects. Why suppose that cognitive acts are the only effects that could precede their causes? Why not suppose that a window that breaks at 3 P.M. has not yet been caused to break but at 3:15 P.M. the cause will occur? The idea is perfectly senseless, but I suppose it is one of the tiresome tasks of philosophers to detail its senselessness.

Perhaps, though, precognition does not entail that the future causes the past. "Precognition" may be just a label for the fact that certain people are able to predict events beyond what it seems possible to do. But the evidence for this is unwarrantable because the experiments designed to prove this have been replicated with subjects that cannot possibly have ESP abilities. Helmut Schmidt has made precognition and psychokinesis experiments on cockroaches; Cleve Backster has made experiments on yogurt; and W. J. Levy has made them on chicken eggs.[4] If Levy had made his experiments on cigarette ashes I trust no one who is rational would accept his interpretation of the results as evidence for the precognitive or psychokinetic power of ashes. What is at stake, then, is whether I am right in considering the testing of chicken eggs to be as absurd as the testing of cigarette ashes. The fundamental argument is that not every entity is a possible subject when "subject" denotes something able to have experiences. One might concede this but ask how we know eggs don't have experiences. I suppose one might ask the same about ashes. In either case I think the answer is that we are not really in such dark ages and that if we

understand what *having an experience* is we can rule out both immediately. Moreover, we have good reasons to believe certain mental abilities are conceptually related to having a language. Precognition and psychokinesis are amazing abilities, if they exist, and not the kind of abilities a thing could have if it lacked even a rudimentary language, but it is senseless to suppose it could be trying to influence the course of the world without its possessing some conceptual machinery.

Schmidt's experiments are widely regarded in ESP circles as among the most impressive experiments establishing ESP.[5] However, if experiments performed on entities that can have no experiences are similar in design and results to experiments on humans, then if the former experiments do not establish ESP for the entities incapable of experiences the experiments done on humans cannot rightly be taken as establishing ESP for humans. To illustrate this point consider the experiments done by Clarence Leuba.[6] Leuba first machine-shuffled decks of cards and then matched the cards from the different decks. The first deck was the "subject" predicting the cards of the second deck. The matchings gave results so statistically significant that a less rational person than Leuba might have attributed precognitive powers to the first deck. Leuba, however, realized he was dealing with "subjects," not subjects. Suppose one performed the experiment substituting humans for the first deck. Then, if Leuba's experiment does not show precognitive abilities for a deck of cards, the second experiment, being structurally identical, does not establish precognitive abilities for the humans.

Let me now turn to the third member of this triumvirate—psychokinesis (PK). What makes PK so wildly implausible is that no one knows even how to try to exert a psychokinetic effect on things. One can't bring about an outcome without bringing about the means to that outcome. If I will the face-up of a die to be a six, my willing must come to nought unless I can also bring about the movements of the die. For surely how the die ends up is determined by its movements. And I take it that it is an indisputable fact that those who will the outcome of dice do not also bother to will the movements of the dice. One can take the matter further and say that nobody knows even how to try to will the movements of the dice. For in order to try one must know what constitutes a try. A try is not a mere tensing of muscles, a screwing-up of the brow, or a focusing of attention on some desired result. Try, for instance, to will Mt. Everest to move four inches to the left. Now try willing it to move five inches to the left. What did you do differently? Why would someone regard thinking of Everest and saying "Move, Everest, move!" as constituting a try, even if only an exceedingly poor one? To believe you are trying is no guarantee that you are trying. Or, at best, mere belief that you are trying guarantees trying in only the most jejune sense of the term; so there is no relationship between believing you are trying and succeeding. Consider someone who tries to move Everest by putting sugar in his coffee. Is this more or less ludicrous

than saying "Move, Everest, move!"? Neither "try" is part of a rational plan, and no one can succeed without a rational plan except by luck (unless the act is a particularly simple one).

If willing an event to happen is to have any chance of being efficacious, then it must have logical features that distinguish it from mere wishing. If I merely wish that this paper gets written, nothing will happen. Clearly every case of psychokinesis described in the ESP literature amounts to nothing else but wishing. A man who says to himself, "Six, six, six!" is not trying to influence the outcome of a roll of the die; he is merely wishing for an outcome. Suppose, in any case that sixes come up one-third of the time over a very long haul whenever Smith wishes for sixes. What should we make of this? Well, what should we make of the following? Smith has no idea I am rolling dice, but I subsequently learn that during the course of my phenomenal run of sixes he has been putting sugar in his coffee. If sanity requires my not drawing any connection between Smith's sugar addiction and my successes, then it equally requires my not drawing any connection between his wishing for successes and getting successes. Perhaps we would have a mystery to unravel if a person's wishes correlated highly with successes; but, given what we know about the logic of wishing and trying, we have no good reason to postulate that the mystery would point to psychokinesis.

V

Lastly, a few words about experimental precautions. First, *any* experiment is unsatisfactory if it is agreed to beforehand by the subject, for the experiment then becomes *his*, not the investigator's. This is the fundamental lesson to be learned from the history of magic. The ingeniousness of magicians can never be overestimated. Second, there can be no compromising with half-baked ideas about the "need for sympathetic observers" or with the claim that "the subject performs well only for certain tasks and not necessarily for others." (He is excellent working with pinochle decks but not rummy decks.) The fact is that the subjects and experimenters, if nonfraudulent, know nothing about what conditions are good for ESP, and it is noteworthy that the most impressive nonexperimental anecdotes are unrelated to "favorable conditions." So the best place to conduct a seance is on a sandy beach in broad daylight, with all eyes wide open and no tables or other props present. Mediums who refuse to work under these conditions should be dismissed without further ado.

The best experiments will bypass the need for statistical analysis and, indeed, not be susceptible to it. Up until now statistical analyses have been used because investigators have been testing for ESP *ability*, a term that implies a disposition to get results above chance expectations. But a decisive experiment would provide confirmation that a person has had an ESP experience regardless of whether he is able to repeat his performance.

When certain phenomena are genuinely established, then talk of "odds against chance" is downright silly. What, for example, is the probability that Woodrow Wilson was once President of the United States?

The kinds of experiments that would be impressive have never been done, and I fear the reason is obvious—there is not the slightest chance that any subject would have an ESP experience. When I say the reason is obvious, I mean it quite literally. It is obvious to ESP investigators, too. However, they would say that perhaps ESP doesn't occur under such unfavorable conditions. Perhaps indeed.

Notes

1. R. H. Thouless, *From Anecdote to Experiment in Psychical Research*, p. 1.

2. "ESP and Attempts to Explain it," in *Philosophy and Psychical Research*, S. Thakur, ed., pp. 17-45.

3. "Seven Evidential Experiments," *Zetetic Scholar*, no. 6 (1980): 92.

4. For Schmidt, see "Clairvoyance Tests with a Machine," *Journal of Parapsychology*, 1969, and also "PK Experiments with Animals as Subjects," *Journal of Parapsychology*, 1974. For Levy, see "Possible PK by Chicken Embryos to Obtain Warmth," *Journal of Parapsychology*, 1971. Backster's work has been reported in the popular press but I cannot now locate any specific references. Marcello Truzzi, editor of *Zetetic Scholar*, informs me that Backster's work is not highly regarded in the ESP community and hence I ought not to try to capitalize on his follies.

5. See, for example, Beloff's "Seven Evidential Experiments," *Zetetic Scholar*, op. cit.

6. "An Experiment to Test the Role of Chance in ESP Research," in *Extrasensory Perception*, F. Gudas, ed., pp. 55-58.

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Alternative Explanations in Science: The Extroversion-Introversion Astrological Effect

This "effect" is due to people's own knowledge and expectations about their zodiac signs

Ivan W. Kelly and Don H. Saklofske

Recent years have shown a significant growth of interest in purportedly paranormal phenomena. It often appears that many individuals will believe almost anything that wears the mantle of science. Too many of us forget that scientific truth is acquired by the rigorous testing of ideas and by the elimination of alternative explanations. It is premature to entertain a paranormal hypothesis unless all plausible "normal" alternative hypotheses have been ruled out. Presentations of ideas to the scientific marketplace where they can be confronted by informed critics should precede general publication. In the paranormal field this does not always occur, and so the public is often misled by a presentation of disputable data in support of paranormal claims.

An example of the importance of ruling out alternative explanations can be found in recent psychological literature. Jeff Mayo, a prominent astrologer, approached Hans Eysenck, the renowned British personality theorist, to collaborate with him on a test of astrology. Astrologers contend that there is a relationship between the personality of human beings and configurations of the constellations and planets. Most prominent in astrological theory is the zodiac, or sun sign, of an individual. This refers to the time of year during which an individual is born. There are twelve zodiac signs, and they can be classified in various ways. As well as its individual characteristics, each sign is said to be either positive or negative:

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positive signs describe a tendency to be extroverted; negative signs, a tendency to be introverted. Mayo and Eysenck were to examine the popular astrological claim that individuals possessing an extroverted personality are born more often than would be expected by chance under the odd-numbered or positive signs (Aries, Aquarius, Gemini, Leo, Libra, and Sagittarius). Introverted individuals, by this claim, tend to be born more often than would be expected by chance under the even-numbered or negative signs (Cancer, Capricorn, Pisces, Scorpio, Taurus, and Virgo). If there was some validity to this assertion, it would be reflected in the scores of personality tests. The Eysenck Personality Inventory (EPI) was chosen as the vehicle to examine this claim.

A total of 2,324 adults (917 males and 1,407 females) completed the test. The results of the study provided prima facie support for both hypotheses. All the positive zodiac sign groups had higher than average extroversion scores and all the negative zodiac sign groups had higher than average introversion scores. Although the differences between the groups were marginal, they were statistically significant (that is, they could not be accounted for by chance).

Even before the study was published, astrologers had heard about the results and trumpeted their triumph to the media. Sydney Omarr, the noted astrologer, boasted about the results in early 1977 in his daily column, which appeared in hundreds of newspapers across North America. The Canadian magazine *MacLean's* also gave prominent coverage to the findings. Eysenck was featured on the NBC television special "In Search of... Astrology," where these results were further disseminated to the public.

The study was subsequently published in the *Journal of Social Psychology* under the title "An Empirical Study of the Relation Between Astrological Factors and Personality" (Mayo, White, and Eysenck 1978). The article created considerable controversy in psychological literature. There followed in rapid succession two studies that supported the findings (Smithers and Cooper 1978; Jackson 1979) and then two failures to replicate (Veno and Pamment 1979; Jackson and Fiebert 1980). More recently, Saklofske, Kelly, and McKerracher (1981) examined the responses of 241 New Zealand university students (average age 20.9 years) to the Eysenck Personality Questionnaire (EPQ) in relation to odd and even zodiac signs.[1] There were 165 females and 76 males in the sample. Regarding the main hypothesis examined, there were found to be no significant differences in extroversion between odd and even zodiacal signs for the total sample or for males and females considered separately. Although females scored higher than males on the neuroticism scale irrespective of zodiac sign, once again the scores showed no significant differences between odd and even signs for either sex or for the total sample. On the psychoticism scale, males scored higher than females. However, when psychoticism relative to odd and even zodiac signs was considered there

were no significant differences for males, females, or the total sample. In order to ensure that subjects were responding truthfully to the questionnaire items, lie scale items were utilized. There were no sex differences on this scale in response to the items; and when odd and even zodiac signs were considered, again there were no differences noted for females, males, or the total sample. [2]

There were some other puzzles. As Kelly (1979-80) asked, Why did other studies that had examined possible zodiac sign and personality interactions using other personality tests not give significant findings on scales (such as sociability) that are related to the introversion-extroversion dimension of the EPI? This question was soon answered.

Although the results of the Mayo-White-Eysenck study were construed as supporting the astrological hypotheses, both psychology and chronobiology could produce alternative hypotheses for the data. Kelly (1979, 1979-80) pointed out that an obvious alternative explanation would be a seasonal effect operating on a critical perinatal development stage or phase. The chronobiologist Hans Wendt (1978) suggested a related explanation in terms of an imprinting or learning phenomenon that may be contingent upon certain triphasic biological rhythms.[3] Another possibility would be that very early critical stages (nearer conception, perhaps) are also susceptible to some sort of electromagnetic field vector.

Finally, one could consider the systematic self-attributions people make because of their personal notions of "astrology." Individuals aware of their zodiac sign may answer test questions in light of what they know about the characteristics associated with their sign.[4,5] Pawlik and Buse (1979) pursued the latter hypothesis and used controls for their subjects' own beliefs of what their zodiac signs were supposed to mean. They found that the so-called astrological effect in their Hamburg students could be statistically ascribed to their self-attributions. Subsequent research by Eysenck and Nias (Nias 1979, Eysenck 1979) replicated the findings of Pawlik and Buse. They concurred that the entire astrological effect was due to the subjects' expectations and familiarity with the characteristics associated with their zodiac signs. Eysenck and Nias tested over 1,000 children, who showed no sign of the effect. In a second study, adults (Salvation Army students) were selected specifically to exclude any with knowledge of astrology, and they too showed no sign of the effect. The effect appeared in the Mayo-White-Eysenck research because even the group classified as lacking knowledge of astrology probably knew about zodiac signs (and this, after all, is all that is necessary). In fact, in the Mayo-White-Eysenck study subjects had been classified on the basis of their answers to the question: "Do you know how to interpret an astrological chart?" Such a chart involves a relatively advanced level of knowledge.

It is also significant that, of the several studies relating EPI scores to zodiac signs, the one most perfectly in accord with astrological claims (Mayo-White-Eysenck) contained the highest proportion of people in-

clined toward astrology.

The Mayo-White-Eysenck "astrological effect" is an instructive example that underscores the need to eliminate all "normal" alternative hypotheses before embracing a paranormal one. In this case, what at first appeared to be supportive of a paranormal hypothesis was, with subsequent research, destined to have a nonastrological explanation after all and, indeed, to count *against* the astrological hypothesis.

References

Dean, M. 1980. *The Astrology Game.* Don Mills, Ontario: Nelson Foster & Scott.

Delaney, J., and H. Woodyard 1974. "Effects of Reading an Astrological Description on Responding to a Personality Inventory." *Psychological Reports* 34:1214.

Eysenck, H. 1979. "Astrology—Science or Superstition?" *Encounter,* December, pp. 85-90.

Jackson, M. P. 1979. "Extroversion, Neuroticism, and Date of Birth: A Southern Hemisphere Study." *Journal of Psychology* 101:197-98.

Jackson, M., and M. S. Fiebert 1980. "Introversion-Extroversion and Astrology." *Journal of Psychology* 105:155-56.

Kelly, I. W. 1979. "Astrology and Science: A Critical Examination." *Psychological Reports* 44:1231-40.

——1979-80. "Studies of Astrology and Personality." *Psychology* 16:25-32.

Mayo, J., O. White, and H. J. Eysenck 1978. "An Empirical Study of the Relation Between Astrological Factors and Personality." *Journal of Social Psychology* 105:229-36.

Nias, D. K. B. 1979. Personal communication, December.

Pawlik, K., and L. Buse 1979. "Selbst-Attribvierung als differentiell-psychologische Moderator variable: Nachprufung und Erklarung von Eysencks Astrolgi-Personlichkeit-Korrelationen." *Zeitschrift fur Sozialpsychologie* 10:54-69.

Saklofske, D. H., I. W. Kelly, and D. W. McKerracher 1981. "Astrology and Personality: Yet Another Failure to Replicate." Unpublished manuscript, University of Saskatchewan, Saskatoon.

Smithers, A. G., and H. J. Cooper 1978. "Personality and Season of Birth." *Journal of Social Psychology* 105:237-41.

Veno, A., and P. Pamment 1979. "Astrological Factors and Personality: A Southern Hemisphere Replication." *Journal of Psychology* 101:73-77.

Wendt, H. 1978. "Season of Birth, Introversion, and Astrology: A Chronological Alternative." *Journal of Social Psychology* 105:243-47.

Notes

1. The Eysenck Personality Questionnaire (EPQ) is the latest version of the personality measures developed by the Eysencks. It includes the scales of the EPI and an additional scale labeled "psychoticism" or "tough-mindedness."

2. One astrologer, Malcolm Dean (1980, pp. 260, 263) has gone so far as to state that the "world-views" of the experimenters are responsible for the negative results in most zodiac sign-personality studies. This would seem to be taking ad hockery and special pleading to unparalleled heights. It should be mentioned here that the data on which this study was based were not gathered with the testing of astrology in mind. The data were collected to examine achievement in New Zealand students.

3. Amazingly, Dean (1980, p. 260) argued that Wendt's hypothesis was, in fact, congruent with astrological claims! He stated:

> [Wendt] suggested that the Mayo/Eysenck results were simply due to biological rhythms which many people experience with three crests each year. Other biological rhythms have been discovered with this pattern, he noted: Circulatory functions tend to peak in March, July, and November . . . But, his paper provided astrologers with a curious correlation with signs which they had overlooked. Blood is a fluid, and the heart is related in astrological tradition to the Sun (hence circulation). And by a strange "coincidence" in March, July, and November, the Sun moves from a water sign to a Fire sign!

But surely Wendt's hypothesis shows the astrological juggling to be superfluous. This is like someone arguing that a knock on your door proves the presence of a spirit. When you check and find a person there our spiritist argues that there is a person and a spirit knocking at the same time. But our initial reasoning, namely, that the person was responsible for the knocking, is more than adequate. If we have a hypothesis that is consistent with psychological theory why entertain an exotic one?

4. Mayo-White-Eysenck were not completely unaware of this alternative possibility. In their paper they wrote:

> It is clear that the results are in good agreement with the hypotheses outlined at the beginning of this paper: Is there any alternative explanation to that suggested by astrology? The only alternative which occurred to us is that some of the Ss might have known about the connection between personality and zodiacal birth sign traditionally posited by astrologers, and that consequently they might have altered their questionnaire responses in agreement. There are two reasons for disbelieving this hypothesis. In the first instance, the relation between the water signs and emotion is much more widely known than that between extroversion-introversion and the odd-even numbered birth signs; yet the former hypothesis was much less strongly supported. Our alternative hypothesis would have led us to expect the opposite. In the second place, about one-third of the Ss had some knowledge of astrological principles, two-thirds did not. An analysis of the scores obtained from these two groups did not show any significant differences, suggesting that knowledge of astrological principles was not a causal factor. We cannot in the nature of things rule this alternative hypothesis out completely, but it does not seem to us to account for the facts. It is a weakness of the study that only Ss are included who requested astrological predictions from the senior author—i.e., who were not a random sample of the population. It is difficult to see how any selection along these lines could have produced the results obtained, however, and we do not believe that this constitutes a serious weakness of the experiment. (p. 234)

The later research by Eysenck and Nias showed it to be the best hypothsesis after all.

5. There was a precedent in the psychological literature for this possiblity. Delaney and Woodyard (1974) found that a prior reading of horoscopes influenced the self-concept of individuals, as measured by a personality test, even when the subjects were told that "the [personality] questionnaire was 'concerned with Your personality *not* that personality which was astrologically predicted'" (p. 1274). They did not determine, however, how enduring the influence of the horoscope reading was. ●

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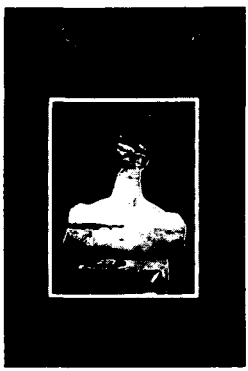

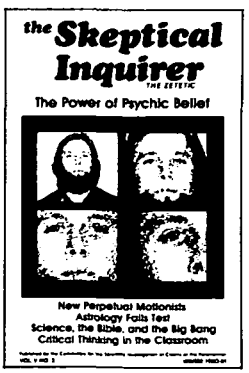
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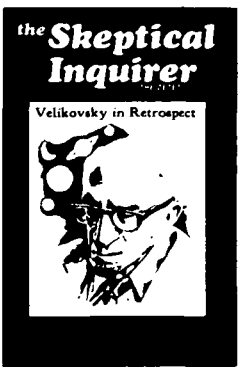

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Art, Science, and Paranormalism

Don't falsely perceive the humanities as in league with the paranormalists

David Habercom

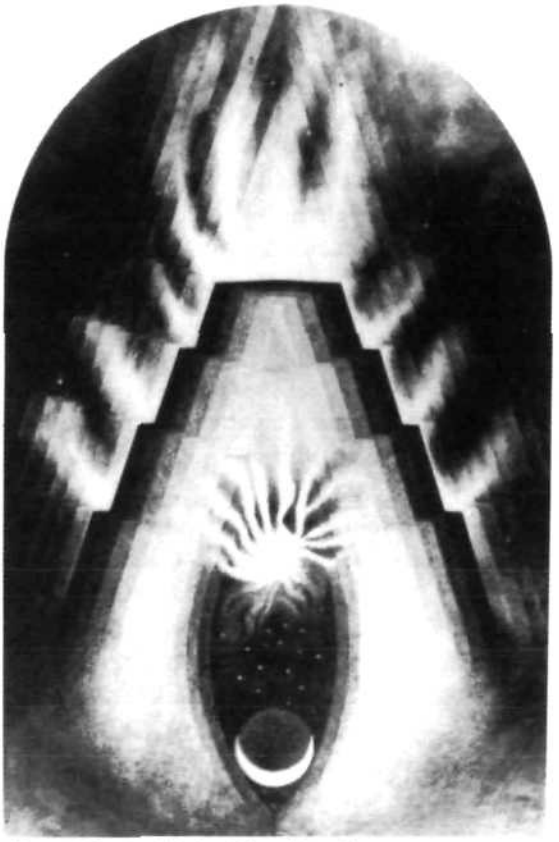
When I work as a poet, I know I'm out of synch with much in society, with many of its assumptions, and with part of myself. I never begin a poetry reading without feeling a need to give myself and my audience some kind of permission to go a little crazy. Poetry can't work if we don't go a little crazy.

Neither can science, for that matter. Not crazy in the same way exactly, but crazy. The creative process in any human enterprise requires the free play of imagination, dancing randomly around a range of improbable possibilities, mostly because it's the best we can do at the time. When scientists need a hypothesis to explain an anomaly, they don't go to an index of likely ideas in order to find it. They have to make it up. The cool and sophisticated Ph.D. in white has to take sort of a wacky guess. Circumspect wacky, but wacky. It's not a lot different in form than what poets do.

Which brings me to the point of this essay. A fair number of writers in this magazine have naively behaved as if science were somehow a fortress of logic besieged by drooling irrationals, an untidy bunch including palm readers, snake worshippers, and musicians. The writers to whom I refer have not, to their credit, uttered the notion quite so crassly as that, but the prejudice does noticeably slosh over their shoes.

As a poet, I want to extricate myself and other artists from the

David Habercom is a writer of prose and poetry and an instructor in the English Division, Delta College, University Center, Michigan.



"Pyramid Series: Virgin of Guadalupe"
Artist: Russell L. Thayer, sculptor and artist, Detroit, MI

company of paranormalists and in the process maybe clarify for some readers certain distinctions about the scientific method. I'm not embarrassed by poetry but proud of it, and with good reason, and since art looks sort of like astrology to some specialists in these pages, I think a little talk about how art really works is in order.

For starters, rational thought is not the same as logical thought. Aristotelian logic requires very specific structures, follows very definite rules, and is not a whit better than the data with which it has to work. It yields to no value judgments outside itself and is as useful to a demonic torturer as to a humanist.

But rational thought is broader than that and includes an interplay between logic and much that is decidedly not logical. It is perfectly rational to live with contradictions, though to do so isn't very logical. Men's neckties are not exactly a logical carry-over, but certain social settings make the wearing of them entirely rational.

Creative activity is rational, too, and the creative process in science is not significantly different from that in art. Scientific creativity requires constantly pulling up from imagination possibilities that have no basis at all in logic. A hypothesis is a little piece of speculative fantasy. A laboratory test of it is conceived out of guesswork. Even the decision to regard certain kinds of evidence as appropriate proof comes from speculation.

None of these fantasies, of course, goes undefended for long. In fact, most fall under logical attack at once. The demand for proof in science is so integral and bears so hard on every move that much of imagination's work is dumped as quickly as it appears. Typically, I dare say, a scientist will scan and reject on the spot several possible hypotheses and tests before choosing. Such rejections are based on already known evidence or agreed-to assumptions, and they constitute a kind of surrogate testing in the scientist's head.

Creativity in art also follows a speculation-and-test process, though the latter part may be less obvious to some—including some artists. The fantasy part, I think, is fairly clear in the making of metaphors. A metaphor, the essential tool in practically all art (I use the word figuratively for some arts, like music), is the result of intentionally representing one thing as another—an act so defiantly illogical it seems as a concept almost lunatic.

But there is a testing step, too, not so methodical as the one in science, but still crucial. Very crudely put, it is the test of audience response. Though many nonartists—and, unfortunately, some artists, too—have the notion that art is merely self-expression and subject only to the artist's or critic's isolated judgment of quality, they are wrong.

All good art is communication. Poetry is a kind of talking, says William Stafford. So the intended audience has somehow to understand. The artist in effect returns the work to the society that fostered it and watches to see if it is understood. If it isn't, then, like a hypothesis, it gets revised.*

The creative process in art is, in form, pretty much the same as in science.

Paranormalists, however, deviate radically from that pattern. As writers in these pages have repeatedly demonstrated, paranormalist claims have a powerful tendency to come with misunderstood evidence or evidence entirely fabricated. No real testing has taken place, as a rule, or

*This depiction will rightly appall many of my artist friends, if they believe I am saying that good art is that which enjoys the widest popularity. I emphatically do not mean that. I describe here a process, not a standard for judging quality. Quality has to do with the individual artist's ability to make the process result in a work of particular clarity, depth, or precision. Nothing in my depiction is meant to diminish individual genius.

test results are ignored.

A good artist can no more get away with such irresponsibility than can a good scientist. Attempting to do so almost always results in bad art, works that do not move us even when technically proficient.

The function of art is to illuminate our deepest common vision, and that vision is decidedly illogical. But I want to stress the *commonness* of the vision that art serves, because that fact puts tremendous pressure on the artist to be democratic, to solicit in an open environment the affirmation of free people. Otherwise, the work can have no validation, unless by some remote chance it is one day discovered and acclaimed. Art is intensely social in process and purpose. Good artists say what we all need to say but cannot for want of a voice. And so a struggle toward recognizable honesty and integrity is absolutely integral.

In its own way, then, good art, like good science, begins by accepting that nature is as it is. A good artist wants to know the truth about the world—and especially about our view of ourselves in the world—and art is an attempt to reveal something of that vision, however erratic and crazy the vision may be. If our art seems strange, it is because we are ourselves stranger than we can imagine.

But paranormalists seem to have a devilish time taking the world as it is. They have no appropriate habits or apparent inclination to seriously return to nature in order to know where their hypotheses stand. In paranormalism there seems to be no devotion to the world and no real awe. In fact, paranormalists seem to reject the world. J.C. Pearce, in *The Crack in the Cosmic Egg,* opens, "And so I write for that reader who cannot stand where he is and has no place to go." Such motives as that do not drive science and they do not drive art. They don't even drive fantasy art. Such motives as that drive religion of the supernatural. Paranormalists don't *want* to know the truth about the world.

What do they want? Without close psychological studies, it's hard to say, but I have a guess. When they are serious, they probably want the same thing we all ultimately want: power against mortality. For most artists and scientists, that is not so much power to *defeat* death as to demonstrate fearlessness in its face, to achieve a kind of transcendence by having the nerve to actively study and manipulate our condition. We can't defeat our captor, but we can certainly study him or her or it with an unswerving gaze.

But it seems to me that paranormalists want to defeat death. Part of my evidence resides in the remarkable number of paranormalist claims that would imply some kind of immortality: reincarnation, the supervision and probable guardianship of intergalactic or inter-reality travelers, voices and embodiments from beyond the grave, and so on.

But the greatest evidence that paranormalists would defeat death by

fiat resides in their overwhelming desire to attack the knowledge we've acquired through "establishment science." Keep in mind that it is science that has most directly caused us to alter our traditional religious views, all of which promised life after death. Clearly, to recover immortality, one must begin by attacking any knowledge that implies it does not exist.

A parallel between traditional authoritarian religion and paranormalism was vividly borne out by Bainbridge and Stark in their recent article in these pages (*SI*, Summer 1980). Their analysis of questionnaire data led them to firmly conclude that "cults and individual cult activity tend to be most common where traditional churches are the weakest." Being responsible scientists, they did not leap ahead to claim that a substituting process is underway, but as a nonscientist, and with a poetic license to boot, I'll cheerfully make the claim myself: some people want authoritarian religious structures, and if they happen not to have the ones available from among our churches, they make up others—or find alternatives made up by somebody else.

However, the probable parallel between paranormalism and traditional religion does not make a parallel between paranormalism and art. True, from the first art was sponsored by religious institutions. But great art speaks to things in us that are far too deep for doctrine—which underlie doctrine's often grotesque logic. That is why the art outlasts the doctrine, why we still are moved by Bach's masses or Michelangelo's *Pieta* even when we disavow the church that footed the bill. Doctrine can only open the door for art, just as it can so decisively slam it shut. However, good art will not speak doctrine, but just use its crude shelter. Much like science, for that matter.

But the paranormalist's fear, I'm convinced, *is* for authoritarian doctrine. Paranormalism is fear's attempt to save us from the tree of deepening knowledge. Why else would it turn from the best habits of study and thought we have achieved, if not for fear of the power and freedom knowledge brings? The same fear that once wrote we should never have eaten from the tree now writes we should not continue to devour. The shameless probings of science and the blatant assessments of art are mature activities that defy the authoritarian instincts of childhood, the infantile hunger that once gave us a father-god and that now gives us the emerging articles of paranormalist faith. So the believers attack science and, in the act, attack art, too.

The methods of art and science alike are intended to probe endlessly, no matter how frightening the ideological consequences, no matter how many assumptions crumble along the way. (Lest some rationalist doubt that continuing property in art, I recommend sitting through a good stage production of Peter Shaffer's *Equus*, for example. He lets the black door

bang open and then leaves it there.) But paranormalists, despite their loud accusations that fear resides in the scientific establishment, seem to me themselves afraid of how far humans might go if left to their own devices. So they attack the most pertinent device, science, and substitute its opposite, unexaminable faith.

From my point of view as a poet, paranormalists definitely work with metaphors, though they don't know it. The Bermuda Triangle mystery, for example, is not a mystery at all, but it *is* something. It is a metaphor for the deep mysteries that draw us and that awaken our awe.

For a scientist, the desire to feel that awe may not reach fulfillment until it finds the outer reaches of theoretical physics. For any artist, it may lie in the excitement of making a small poem or in the massive anguish of *King Lear.* But for the paranormalists, a simple metaphor, casually assembled with a scientific patina, but untested as either science or art, seems quite enough. They are satisfied with a metaphor of the real thing, because the real thing is what they fear.

Having laid these burdens on paranormalism in defense of art, I'm compelled to close with the concession that art and science have not been happy bedfellows in recent years. My limited experience among scientists and their writing suggests strongly that they generally misunderstand the methods and purposes of art, and especially of the language arts. And I know well that artists usually do not understand the method of science.

We are all narrowly educated and nothing in our lives requires us to be otherwise. Humanities curricula usually make a clumsy stab at the sciences —which is more than the sciences usually reciprocate—but, more significantly, we don't reward breadth in our professions, we reward specialization. We have little motive to pay close attention to something that won't advance our careers.

Another source of misunderstanding is that much of art frankly is reactionary and thus postures as an adversary to science and technology. In certain poetry circles, an antirational, antiscience stance is absolutely mandatory for respectability. (Despite all, however, I defend reactionary art. If art is to truthfully speak for our deepest common vision, then it must contain a reactionary element—because part of us is always deeply hurt by knowledge and change, and change is not always for the better. A good artist can no more color the truth than can a good scientist.)

And, finally, a great source of misunderstanding among artists and scientists is the huge body of bad and mediocre art that makes its way into public view. The reason I keep referring to "good art" here is that I cannot attribute to all of the stuff we see the deeper purposes that art can in fact serve. The reason we find so much bad art is that, because art is social, its failures must be public. Our laboratory, if you will, is everybody. Scientists

generally can conceal their myriad little embarrassments and thus maintain a cleaner facade.

But all this misunderstanding between artists and scientists is only the predictable result of specialization, and no one is to be harshly blamed. Blame falls chiefly to those who remain ignorant of their own avowed enterprise, and that is for quite another group than these. ●

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Profitable Nightmare of a Very Unreal Kind

A tabloid writer's revealing inside experience with the Travis Walton UFO case shows that not all was as it was represented

Jeff Wells

When "UFO madness" swept Australia in 1979, it prompted journalist Jeff Wells to recall his own earlier involvement in what many American UFOlogists consider to be a "classic case," the alleged abduction of Travis Walton on November 3, 1975, near Heber, Arizona. At the time, Wells was employed by the National Enquirer *and was one of a team of its reporters dispatched to Phoenix to interview young Walton shortly after he reappeared claiming to have spent five days aboard a UFO. The* National Enquirer *team was joined by James A. Harder, professor of civil engineering at the University of California at Berkeley and director of research for the Aerial Phenomena Research Organization (APRO), a large UFO organization whose leaders fully endorse Walton's tale. The lie-detector test described by Wells, which Walton flunked, was administered by John J. McCarthy, the most experienced polygraph examiner in the state of Arizona. The results of this test were kept secret from readers of the* National Enquirer, *from APRO members, and even from members of a blue-ribbon panel of UFOlogists, who later selected the case as the most impressive UFO incident of 1975 and awarded Walton and his six co-workers a prize of $5,000. Journalist Wells offers some interesting, humorous, and, we think, significant insights, based on his own brief involvement in the incident, in the following article, reprinted through the courtesy of* The Age, *a Melbourne, Australia, newspaper.—ED.*

The characters in this UFO story are real even if they appear more like the inventions of a Hollywood hack.

A haunted young man, a ruthless cowboy, a strange professor, a hard-drinking psychiatrist, and a bunch of reporters.

All were thrown together in the desert heat by a close encounter of the third kind, and maybe they did contribute to some Hollywood thinking.

I was there and I can vouch for the motley human cast — but you will have to make up your own minds about the extraterrestrials with the fishbowl heads.

Some of the characters are still growing fat repeating their versions of the story in the seemingly limitless American market for the bizarre.

The so-called facts, the carefully woven tapestry of circumstance that has become the "official story," can now be counted as UFO lore, pabulum for those who turn their heads to the sky in search of meaning for their lives.

I will never get rich on my version and I only tell it because of the UFO madness the papers tell me is sweeping this part of the world.

The UFO phenomenon is really rolling here, as it has rolled for many years, and it has snowballed into juggernaut proportions in other countries where it is very big business.

The stronger it gets here, the closer the attention that will be paid to the so-called classic cases of UFO encounters.

You may recognize elements of this story among them. If so, you will realize thay my story is a warning that, in such cases, even the most celebrated and supposedly well documented, there is nothing so pragmatic as proof. This incident happened a few years ago and made world headlines.

I was working in San Francisco as a bureau man for a national weekly that has grown rich and powerful in catering to the middle-country craving for cancer-cures, Jackie Onassis, Hollywood gossips, psychic predictions, and like ingredients of the crumbling cake that is the American mind.

It was naturally a matter of interest that a 22-year-old forestry worker was missing and that six witnesses had passed lie-detector tests when saying that he had last been seen running toward a huge UFO. [Because local law-enforcement officers suspected that Travis Walton might have been a victim of foul play at the hands of his co-workers, three of the four questions asked during their polygraph tests dealt with whether Walton had been killed or injured. The fourth question asked only if the subject had seen a UFO. Five of the six co-workers passed the tests. The sixth was inconclusive. —ED.]

My paper had offered tens of thousands of dollars to anybody who could positively prove that aliens had visited our planet — in the know-

Cover of Travis Walton's book about his abduction

ledge that exclusive rights could be worth millions.

When, five days later, the young man we came to call "the kid" stumbled into town, phoned his cowboy brother and claimed that he had been kidnapped by the crew of an alien spacecraft, we were ready.

Within an hour I was on a plane to rendezvous in a desert city with a team of reporters and photographers flying in from Los Angeles and the East Coast.

At the desert airport I bumped into one of them, a dapper young Englishman from the L.A. bureau, who briefed me. One reporter was at the cowboy's home talking money; the kid was inside in a state of shock.

The office was wiring $1,000 to help ease the kid's discomfort and a celebrated UFOlogist, a California professor, was being flown in, all expenses paid, to lend a hand.

Our immediate task was to bribe the brother with the thousand to hole up with us in a luxury motel on the outskirts of town, no names registered, where the rest of the press, who were about to descend, and the sheriff, who was calling the whole thing a hoax and demanding that the kid take a lie-detector test, would not bother them.

"It isn't going to be easy," said the Englishman as we pocketed our credit cards and headed for our rented Pontiacs. "The brother has taken charge and the brother is some kind of psychopath. The kid is scared to death of him, and so is our reporter."

The cowboy was no disappointment. He was one of the meanest and toughest-looking men I've ever seen — in his late twenties, a rodeo professional and amateur light-heavyweight fighter, a total abstainer, broad shouldered, T-shirt packed with muscle, chiseled-down hips, bow-legged, eyes full of nails, tense, unpredictable.

He leaned against a pick-up truck with a gun rack in the cabin and raked us with beams of cunning and hatred as strong as the flash from the spaceship that had pole-axed his brother as the witnesses fled in terror.

"Nobody is going to laugh at my brother," he said. Nobody wanted to laugh at his brother, we said. We wanted only to give his brother a chance to tell his story to somebody who would understand.

To prove our bona fides, and to keep away those other jackals of the press, who would embarrass the kid with foolish questions, we would hide them away and pay the kid a grand to tell his story.

If we liked the story, and it could be properly documented, and the kid could pass our lie-detector test, we would open our checkbooks all the way and start talking in five figures.

To our relief the cowboy agreed — but not, he said, because of the money, because his brother had a true story to tell which would enlighten the world.

Our first sight of the kid was at dinner in the motel dining room that night. It was a shock. He sat there mute, pale, twitching like a cornered animal. He was either a brilliant actor or he was in a serious funk about something.

But the arrival of the professor saved the day. He was as smooth as butter. He soon had the kid eating out of his hand.

"You are not alone," he crooned. "There are many people, more than you would think, who have been chosen to meet them."

Them? I began to wonder about the professor.

The cowboy was so impressed he began to talk about his own UFO experience, when he had been chased by a flying saucer through the woods as a child.

Within a couple of hours the professor had talked the brother out of taking the sheriff's polygraph test and into a hypnosis session in his room immediately.

It looked as if things were going smoothly enough, with no hint that we were faced with four days of chaos.

The next day the office announced that the whole story was to be filmed by a crew from the top-rated CBS muckraker TV show "60 Minutes." We were to be on guard because CBS was out to shaft us, my editor warned.

We were to present a bold front for good footage of dedicated

reporters sparing no expense to bring the public the true story of one of the most amazing incidents in recorded history.

The kid's fantastic story had been coming out under the hypnosis, but the brothers had become very conspiratorial with the professor and would speak only to him.

The professor seemed to have his own future on the lecture circuit and the paperback bookstands very much in mind, and we didn't trust him. [Professor Harder did not write a book on the incident, but a paperback, listing Travis Walton as its author, subsequently was published. —ED.]

So we taped everything and had the CBS crew film the kid's story given under hypnosis. It was a tale of little men with heads like fishbowls and skin like mushrooms.

But suddenly the strain began to tell on the kid and he lapsed into sobbing bouts. He was falling apart, and so was his story.

It necessitated flying in a husband-and-wife team of psychiatrists from Colorado to tranquilize the kid and keep the cowboy from exploding.

The kid was a wreck, and it was all the psychiatrists could do to get him ready for the lie-detector expert we had lined up. [Wells's recollection of the chronology of events is in error. The polygraph test was given by McCarthy in the early afternoon of November 15, 1975, and the two Colorado psychiatrists did not arrive in Phoenix until that evening. —ED.]

The test lasted an hour, and I was in the next room fending off the TV crew when I heard the cowboy scream: "I'll kill the sonofabitch."

The kid had failed the test miserably. The polygraph man said it was the plainest case of lying he'd seen in 20 years, but the office was yelling for another expert and a different result.

To head that off, we had the psychiatrists put the cowboy and the kid through a long session of analysis.

Their methods were unique. The next day the four of them disappeared into a room, and soon a waiter headed in there with two bottles of cognac.

At the end of it the psychiatrists were rolling drunk, but they had their story and the brothers were crestfallen.

It seemed that the kid's father, who had deserted him as a child, had been a spaceship fanatic, and all his life the kid had wanted to ride in a spacecraft.

He had seen something out there in the woods, some kind of an eerie light that had triggered a powerful hallucination that might recur at any time. There was no question of any kidnap by mushroom men. The kid needed medical help and the cowboy swore solemnly that he would shield him from further harassment.

Reports began to filter in that the witnesses' lie-detector tests were not

much help either — they supported the story that they had all seen the strange light but not that the strange light was identifiable as a spaceship.

The CBS crew had left in disgust and I sat down to detail everything that had happened in a 16-page memorandum designed to kill the story. It was all over.

I paid the $2,000 motel bill — including a mammoth bar tab to which the psychiatrists' thirst had contributed nobly—for five days, and we all scattered for the airport.

It had been a lunatic experience from beginning to end, made more disturbing by the fact that on several occasions, with coaxing from the professor, I had almost believed that the story was real.

As I drove to the airport I was never so glad to be leaving a city, and to this day the whole experience there remains in my memory as some kind of nightmare.

As I neared the airport I switched on the car radio and heard familiar voices — the kid, the cowboy, and the professor giving an interview about the kid's shattering experience on board a flying saucer.

A few weeks later I picked up the paper I worked for and found that with the help of the professor it had turned my memorandum into a sensational front-page story. [This *National Enquirer* feature story, which appeared in the December 16, 1975, issue, was headlined: "5 Witnesses Pass Lie Test While Claiming: Arizona Man Captured by UFO." There was no mention of the test taken by Walton that he had failed. The article quoted Professor Harder as saying "after he had known all the facts" he was convinced that Walton had been abducted by a UFO. —ED.]

The professor was calling me up demanding tapes for his lectures, and the kid was signing contracts for books and TV documentaries.

And so another UFO hero was made. [On June 20, 1976, Philip J. Klass, chairman of CSICOP's UFO Subcommittee, after six months of investigation into the Travis Walton case, issued a privately published White Paper characterizing the incident as a hoax and revealing the heretofore secret McCarthy polygraph test and its results. Klass concluded that the incident was probably contrived to extricate Walton's boss from a timber-cutting contract with the government in which he was seriously delinquent because of "moonlighting" on other, better-paying jobs. —ED.] •

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A Maltese Cross in the Aegean?

An inquiry into an ancient-spacemen claim

Robert W. Loftin

In the fourth chapter of his book *Our Ancestors Came from Outer Space* (Doubleday, Garden City, N.Y., transl. by Orest Berlings, 1978), Maurice Chatelain makes the claim that the most sacred place of ancient Greece, the island of Delos, is the geometric center of a Maltese cross of majestic proportions that extends for hundreds of miles over the Aegean Sea, Greece, and Turkey. This claim has often been repeated, for example, on the television program "In Search Of . . .," and would certainly be amazing if true. I decided to investigate.

Chatelain gives us detailed directions on how to generate this pattern in order "to show that this gigantic geometric figure is not a figment of imagination and no science-fiction invention." He directs us to take a good map of the Aegean and place one point of a compass on the island of Delos. Then measure a radius of "1,500 ancient Egyptian stadia, or 270 km, and run the trace arm of the compass full circle. We will have passed in succession through Cape Matapan and Delphes in Greece, the island of Psathoura in the northern Sporades, Antandrus and Sardes in Anatolia, Camiros on Rhodes, and Akra and Araden on Crete.

"Now let's trace a smaller circle with Delos still in the center. A radius of 1,000 Egyptian stadia, or 180 km will give a ring that connects Hermione in Greece, a high bank between the island of Lesbos and Skyros, Didyme in Anatolia, and a point now submerged north of Dia Island. Thus, if we include Delos, we have thirteen geographical sites that have always been sacred places marked by temple ruins constructed over even more ancient ruins from time immemorial."

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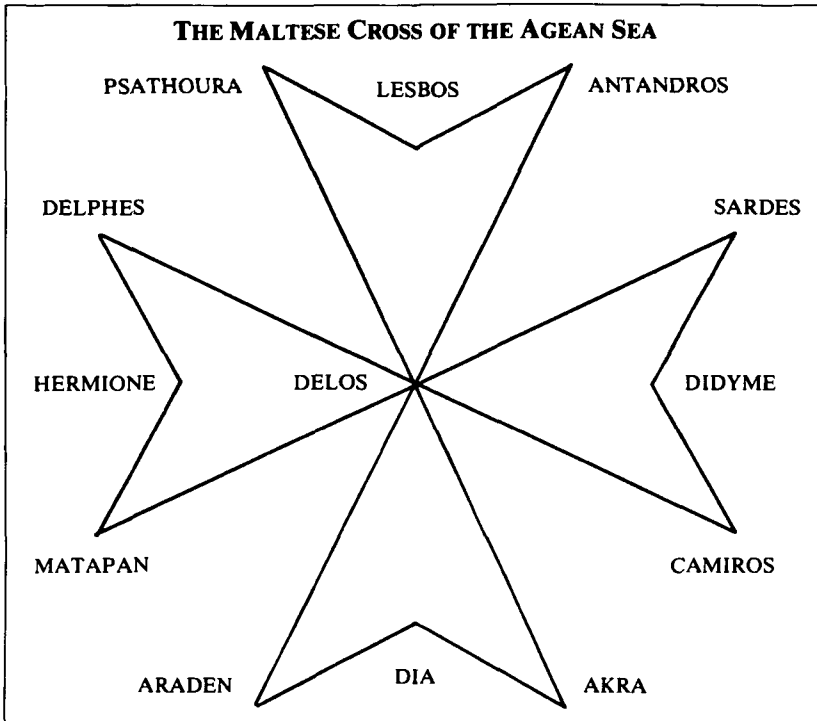
THE MALTESE CROSS OF THE AGEAN SEA
PSATHOURA
LESBOS
ANTANDROS
DELPHES
SARDES
HERMIONE
DELOS
DIDYME
MATAPAN
CAMIROS
ARADEN
DIA
AKRA
A beautiful Maltese cross centered on the island of Delos and 540 kilometers wide, can be obtained by tracing lines between thirteen famous Greek temples around the Aegean Sea, but ancient Greeks did not know it. Was that cross traced by astronauts from outer space several thousand years ago?

FIGURE 1. Chatelain's "Maltese cross" and his description

Chatelain then moves from the two circles to the Maltese cross by pointing out that, if we connect the points in the correct order, we come up with a beautiful, very regular geometric figure. He then infers that this cross, being visible only from high in the air, could not have been laid out from the surface. "I do not believe that even today's land surveyors could so precisely mark such a gigantic figure of over 360 miles jumping from island to island and stretching over sea and mountains." Therefore, he infers that the cross must have been laid out by ancient astronauts utilizing very sophisticated technology.

"To measure and mark all the salient points, two very modern tools of mapping are an absolute necessity. First, a fixed-position space satellite that turns synchronously at the Delos latitude of 37°23′ with a ground velocity of 1,328 km ph. Then, to keep the capsule stationary over Delos, one of our newest devices that was perfected only a short time ago—a navigational and distance-measuring ground radar with metallic reflectors installed at distances of 180 and 270 km around the two circles."

I will not cavil at Chatelain's move from two circles to the Maltese cross. Since the points he has identified are not distributed randomly on the perimeter of the circles, but are very regular, I consider this move justified. Moreover, the two circles would be amazing enough to call for some explanation. It is with the choice of the points themselves that I wish to quarrel.

I secured several rather large and very detailed maps of the Aegean area and tried to follow the directions given by Chatelain. I soon found that I could not do so without some difficulty. The more closely I looked at the "Maltese cross of the Aegean," the less plausible it appeared.

The first thing I noticed was that one of the points, "a point now submerged north of Dia Island" was not even on dry land. Chatelain, well aware of this, passes the problem off by pointing out that the sea level in the Mediterranean was once much lower than it is today. He notes that "there are ancient Greek temples and cities that have been submerged by the Mediterranean." Indeed there are, but what reason is there to suppose that *this* particular point is such a place? None whatever. Chatelain has chosen this point not because there is known to be an ancient sunken temple here but because it is the point required to complete the cross.

Close investigation of several other points on the cross reveal similar difficulties. Let's look at the island of Psathoura in the northern Sporades. Was there an important ancient temple there? Apparently not. So far as I have been able to learn, there isn't much of anything on Psathoura except a lighthouse. It is a tiny, wave-washed atoll that doesn't even appear on many maps of the Aegean. There are certainly no large or important ruins there and apparently never were. Its only distinction is that it happens to be at the place on the map where Chatelain needs it!

The same problem emerges with another point, "a high bank between Lesbos and Skyros." Careful measuring of the map shows that the Brouker Bank is probably what is intended. So far as I have been able to learn, there are no known sunken temples on the Brouker Bank. It seems no different from several other banks in the area, such as the Stok Bank, the Lithari Bank, and the Mansel Bank. Here again, its chief distinction seems to be that it is located where needed to anchor a point of the putative cross.

Some of the other critical points identified are at least on dry land, but there are no important temples there and never have been. Cape Matapan and Hermione fall into this class. This is not to say that there is not a ruin of a small, unimportant shrine at Hermione, but that is true of virtually every place in Greece. Certainly Hermione was never an especially sacred site in Greek history. Why choose Hermione when there are such really important sites as Troezen, Tiryns, and, above all, Mycenae, not far away? Again, the major reason seems to be that it happens to be in the right place.

When it comes to "Akra" on Crete, I cannot examine Chatelain's claim critically because I can't tell precisely what he intends. The Greek word *akra* just means "cape," and there are hundreds of places in the

Aegean that include this word as a prefix. On Crete, there are a couple of places in the general area—Akra Plaka and Akra Sidheros, but I can't imagine why he would choose either of these in preference to the ancient Minoan palace site of Zakros only a few miles to the south. The ancient Minoans built no temples, of course, since they worshipped in groves and sacred caves. The archaeological sites on Crete consist of the remains of ancient palaces, not temples.

Moreover, I think it might be interesting to see if the lines of the putative cross are really as precise as Chatelain alleges. This can be rather easily done if we happen to know the exact latitude and longitude of the critical points. The diagram taken from the book (Figure 1) implies that Sardes and Camiros are on exactly the same line of latitude, and it implies that Delphes and Cape Matapan are also. It equally implies that Psathoura and Antandros are on exactly the same parallel of latitude, as are Araden and "Akra." Surely we have a right to expect precision from a race of beings advanced enough to use synchronous orbiting satellites and ground radar with metallic reflectors.

But, alas, a quick check of any fairly large map of the area will quickly convince anyone that it doesn't quite work out. On a small map it seems to because of the errors inherent in the small-scale representations. For example, Sardes is located almost exactly at 28° E., but Camiros lies at somewhat less than that, about 27° 50′. One might reply that the two points do lie in a straight line (any two points do); it's just that our system of latitude and longitude does not exactly correspond with that of the ancient astronauts. If this were the case, then we would expect a line through Psathoura and Antandros to meet a line between Sardes and Camiros at a right angle. It does not.

It is also possible to ask whether a straight line from Antandros to Araden passes directly through Delos—it doesn't. Close, but not quite. A straight line from Delphes to Camiros also misses Delos, but it passes over dry land at Mykonos only a few miles away. Why didn't the spacemen choose this for their sacred spot? A straight line from Hermione to Didyme hits Delos right on the nose, but a line from Sardes to Matapan misses by quite a bit.

What then is left of the putative Maltese cross? Six of the points really are important early archaeological sites located in approximately the right places to determine points on the cross. If we add Delos itself as the center of the cross, that gives us 7 of the 13 points. The other six points are equally divided between points in the open sea and points on dry land that are not important temple sites. In view of these obvious discrepancies and difficulties, I submit that we cannot take the cross as proof of early spacemen drawing geometric figures over the Aegean. ●

Book Reviews

Flim-Flam! The Truth About Unicorns, Parapsychology and Other Delusions. By James Randi. Lippincott & Crowell, New York, 1980. 340 pp. $12.95.

Reviewed by Elie A. Shneour

The author of this important book is a noted professional magician with a mission. James ("The Amazing") Randi is following in the footsteps of that great conjurer whose stage name was Harry Houdini and whose eventful life and art were the subject of an earlier Randi book. Houdini devoted a considerable part of his life to exposing claimants of paranormal powers as charlatans and wrote two books to document his observations, *Miracle Mongers and Their Methods* (1920) and *A Magician Among the Spirits* (1924). Houdini also made elaborate arrangements with his devoted wife and helper, Beatrice, for communication after the death of one of them, with the survivor receiving messages from the other. Houdini died in 1926, and Beatrice, who lived until 1943, declared that all efforts at communication had been a failure.

Randi came to his missionary role as a result of an interesting and revealing experience, which he details in this book. Some years ago he applied for membership in Mensa, the international organization made up of persons exhibiting an intelligence level within the top 2 percent of the population, as determined by IQ tests. Randi took the examinations and did so well that he was invited not only to join Mensa but also to address one of its national meetings. As his topic for the occasion, Randi chose the paranormal. He was booed by his elitist audience for his solid documentation and negative conclusions. To Randi this was startling and alarming: Here was the supposed cream of the intellectual crop refusing to weigh the evidence and consider conclusions with open and perceptive minds. This was too much for Randi; if pretenders to superior intellect could respond with such mindless hostility, how much worse would the reaction from ordinary mortals be? Randi lost no time in resigning from Mensa and getting to work to investigate the claims of psychics, mystics, mind-readers, and parapsychologists. *Flim-Flam!* is

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one of the lasting results.

Although Randi was not trained as a scientist, his use of the scientific method (observe, repeat, conclude) earned him the distinguished forum of the 1980 annual meeting of the American Association for the Advancement of Science to discuss and demonstrate his conclusions. Though Randi handles the intellectual tools of the scientist with great skill, he combines them with the dramatic flair and flamboyance of his conjuring profession. In the opinion of this reviewer, a card-carrying member of the generally cautious and sober scientific fraternity, the combination of science with entertainment is justified here because this is probably the only effective way of gaining the attention of victims and potential victims of claims of the paranormal.

Scientists generally make poor reporters of paranormal phenomena because they assume that paranormal claimants operate in good faith and are telling the truth. Randi is not bothered with such a beguiling assumption and treats his subjects with unlimited skepticism.

In *Flim-Flam!*, Randi discloses a wide horizon of paranormal claims, including several celebrated cases, and mercilessly exposes the facts in a chatty and often witty narrative. He displays contempt for the usually clumsy and often dishonest efforts to prove these claims. His language is blunt, unforgiving, and direct. Randi minces no words about his antagonists or the flaws he uncovers in their behavior and experimental procedures. He has no patience with obfuscation and no charity for fraud.

To demonstrate his general approach, Randi begins his book with the famous case of the Cottingley fairies of the 1920s in England. Two young girls apparently took photographs of winged fairies, a feat claimed to be genuine by no less an unimpeachable authority than Sir Arthur Conan Doyle. Sir Arthur was said to be never wrong, and no one ever dared suggest otherwise because he was not accustomed to being doubted. He held stubbornly to his beliefs about the winged fairies in the face of mounting evidence of fraud. In one of the most astute and revealing analyses in the whole book, Randi discusses the possible motivations for holding such beliefs regardless of logic or facts. It is a well-documented example of how the prestige of a celebrity can give leverage to misleading the public and of why documentation alone is rarely adequate by itself to change opinions or deeply held convictions.

Today, in the age of space and the atom, fiction writers no longer have the public influence once held by the likes of Sir Arthur. That position is now held by scientists, including those who operate at the periphery of science and use its credibility to obfuscate and to mislead. Randi examines such a case in Chapter 7 and breaks new ground by making significant and documented disclosures about paranormal research performed at the Stanford Research Institute (now simply SRI International) in Menlo Park, California, by two parapsychologists, Russell Targ and Harold Puthoff.

The account begins with Targ and Puthoff's 1974 publication, in the prestigious English scientific journal *Nature*, of a paranormal-research report that the editors characterize in an unprecedented accompanying editorial as "weak ... disconcertingly vague ... flawed." But it is accepted for publication nevertheless, the editors add, to show the kind of work being done in parapsychology. But to the media, including the *New York Times*—which reviewed neither the report nor the *Nature* editorial—the fact of publication in *Nature* was sufficient evidence for the

credibility of the claims made. These parapsychologists became the spokesmen of parapsychology. Randi analyzes how Targ and Puthoff carried out experiments with self-proclaimed psychics such as the well-known Uri Geller and how a lesser "psychic" was able to influence the readings of a sophisticated instrument designed to detect a certain subatomic particle.

These revelations merit the designation of incredible. Randi exposes an at once disconcerting and hilarious sequence of what passes for research, with botched experiments slovenly executed, in which the researchers' integrity of purpose and conclusions are dubious at best. The significance of these otherwise laughable and tedious activities is that they were given a respectable forum in a recognized research institution. This work continues to be uncritically reported by the media, and it continues to be explained away by SRI.

Flim-Flam! could have been greatly improved by better proofreading and tighter and more judicious editing. Some readers will be familiar with cases reviewed in this book, but many others will not. A more complete description of what they are about would have been helpful. There is also a disconcerting tendency for one story to jump into another in midchapter without warning, and a few subheadings would have contributed much to clarity.

These problems notwithstanding, *Flim-Flam!* covers more paranormal territory in a more up-to-date manner than any other book on the subject and should be the first choice of the interested reader. It is a perceptive and hard-hitting book by a leading and articulate authority in the field. ●

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The Astrology Game. By Malcolm Dean. Nelson Foster & Scott, Don Mills, Ontario, 1980. 360 pp. $15.98.

Reviewed by Ivan W. Kelly

Malcolm Dean, a broadcast journalist and editor of the astrological journal *Phenomena*, is the author of *The Astrology Game*, which purports to present "the Truth about astrology." In twelve chapters Dean attempts to cover the elements of astrology, daily horoscopes and their construction, astrology and the computer, archaeoastrology, the research of the Gauquelins, critics of astrology, and promising new techniques for use in astrology.

His ultimate aim, apparently, is to vindicate astrology as a reputable form of science. Not only has Dean failed to make his case, but the book is full of slipshod reasoning and misleading information and shows a poor understanding of elementary scientific method.

At times Dean sounds confused. On page 85 he tells us: "The evidence for (zodiac) signs is weak or even negative [but] to the best astrologers, the zodiac is not

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that important anyway." But on page 268, when describing a recent study by the Gauquelins, he says: "As in all their previous research, this study revealed no influence of the sun. Considering the importance placed upon the sun in astrology, all the way from popular sun signs through to esoteric theosophical concepts about soul archetypes, this remains a major puzzle."

Well, are the signs important to astrology or not? For those who would like to think they are, Dean has a handy arsenal of devices with which to get around negative evidence. Perhaps "modern statistical methods [are] incapable of detecting variables of this kind (statistics is still a young science after all)" (p. 231). Or perhaps it depends on the world view of the scientist conducting the test: "Results with the zodiac have been mixed, but this is not surprising given the different world views involved in symbols and statistics. Unless you are prepared to suggest that some researchers deliberately falsified their results through bias, it's remarkable that there were *any* positive results for the signs of the zodiac" (p. 260). And: "Wouldn't this explain why those who work with the system can sometimes obtain positive results, while those who refuse to take up the problem of symbolism and insist purely on statistical tests cannot obtain positive results (except where the Gauquelins are concerned)" (p. 263).

An important concept in astrology is that of the houses, areas of the sky that make up a grid of sorts on which to plot the daily motions of the planets. The houses purportedly affect various areas of life, such as choice of career. The Gauquelins argue that their data do not support the notion of astrological houses. But faith has a way of overcoming negative evidence. One well-known astrologer, Zip Dobyns, argues that the house concept investigated by the Gauquelins is too absolutist and should be more rubbery. She argues: "Based on the individual's faith in what is true, real, morally right, possible and desirable, goals are formulated and choices made" (quoted on p. 244). Dean agrees and adds: "This is a description of how a career is made, and thus it is possible for the traditional astrologer to argue that modern statistics are, in fact, confirming the essence of astrology, not disproving it!" (p. 244). What Dobyns is saying is that people act on the basis of what they believe. This is trivially true, something no one would deny. But it does not demonstrate, of course, that the choice was arrived at rationally or that it was the best option available. What is at issue here is the role astrology plays. The statement "People act on the basis of their beliefs and therefore astrology is in some sense true" is a blatant non sequitur.

Although primarily concerned with articulating and defending his own position, Dean occasionally criticizes competing systems. An extended attack is directed toward three-cycle biorhythm theory: "So if I am not out to protect you from the heresy of planetary influences, allow me to save you from the blunders of biorhythms" (p. 113). One wonders, however, why Dean does not grant the proponent of biorhythm theory the use of the same ad hoc devices and special pleading he himself uses to defend astrology against negative evidence. Following Dean, the advocate of biorhythms can argue that perhaps the biorhythms operate in an extremely subtle manner, or, on the other hand, that all the negative results can be attributed to the world views of the researchers for whom the notion of the existence of three-cycle biorhythms is abhorrent. Or why not paraphrase what Dean says of daily horoscopes: How is it that every so often one's biorhythm chart seems so *right*? There seem to be spells when they don't work, but on many days the general theme does seem to be present in one's experience (p. 99). Then, again,

perhaps a very creative biorhythm follower, taking a hint from the astrologers, can tie his art onto the symbolism and synchronicity framework. Or what about "humanistic biorhythm theory"?

Those who share Dean's view of astrology and those who are on the editorial board of *Phenomena* are praised to the stars. Michel Gauquelin is compared to Galileo (p. 228); Françoise Gauquelin is described as "a careful and serious scientist, precise as a Swiss watch in her methods and criticisms" (p. 253). Eysenck is characterized as a "top" scientist with an "inquiring mind" (p. 258) whose "researches are among the major monuments of modern personality theory" (p. 256). Toward those who do not share Dean's view of astrology, he is vindictive. Roger Culver and Philip Ianna, two astronomers who are knowledgeable about astrology and dared to write a book critical of it, are called "small minds" (p. 313). Similarly, Dennis Rawlins, an astronomer and critic of astrology, is called dishonest because he does not accept the existence of "planetary influences" (pp. 291, 300). And Dean spends 20 pages on a sensationalized attack on members of CSICOP.

The theme underlying the book is the present and future nature and status of astrology. Dean follows the view of the history of scientific ideas expressed by Zip Dobyns: an initial categorical rejection of a new scientific hypothesis, followed by an admission of partial validity, after which comes a convincing demonstration and general acceptance (p. 45). According to Dean, we are now in the middle of this historical progression with respect to astrology (p. 48). We might question whether most scientific ideas do in fact proceed in this way and whether astrology will necessarily follow suit even if they do. The progression outlined by Dobyns is too vague to explicate. Is it supposed to be a general account of how science approaches evidence or of what happens when anomalies occur in science? The latter alternative is less implausible than the former but is vastly oversimplified. If one concentrates on certain selected cases of anomalies (Dean and Dobyns chose hypnosis and meteorites as examples) the progression seems prima facie plausible. However, to build a scientific philosophy on the basis of anomalies that are present in only a few selected cases is to make a very hasty generalization. Even if this progression occurred in the cases in question, is it true of *all* the cases of anomalies? (Note also that what often appears to be anomalous often turns out not to be anomalous at all: the case of polywater, for example.)

The main body of research cited in support of Dean's position is the work of the Gauquelins, who have prima facie discovered interesting, but very weak, relationships between planetary positions and some occupational groups and personality variables. Dean constantly assumes that the Gauquelins have discovered "planetary influences" (pp. 111, 130, Chapter 12). This is false. The Gauquelins have, at most, established statistical *correlations* between celestial events and some occupations and temperament variables. The terms *correlation* and *planetary influence* hardly mean the same thing. Dean has committed the post hoc fallacy. The "planetary influence" hypothesis is only *one* explanation postulated to account for the data. Since no mechanism has been theorized that can adequately account for the data, it is premature to make the inductive leap to the positioning of a "planetary effect." Some third variable may be responsible for the correlation or, again, perhaps there are subtle biases in the Gauquelins' data. Only further research will tell.

But, for argument's sake, let us assume that the Gauquelins' data are valid, and

that "planetary influences" of some sort are responsible. What then? Dean believes that a new *astrology* will emerge. However, that an *astrology* will evolve is unlikely, since this would occur only if investigators retained the astrological symbolism for descriptive and explanatory purposes for yet-to-be-discovered planetary-human relationships and perhaps adopted a principle of synchronicity. This also assumes that science will not be able to provide alternative explanations for any relationships that are discovered.

There are other possibilities that Dean does not consider or like to think about. Just as some parapsychologists believe that, if psychic phenomena can be shown to be lawful, they will eventually be absorbed into mainstream psychology and physics, so could someone believe that the work of the Gauquelins, if found to be valid, could be absorbed into mainstream science, perhaps chronobiology. This constantly occurs in science. Many promising areas of psychology, for example, are constantly being annexed by other disciplines, such as biochemistry, genetics, and physiology. Cosmology used to be part of geology and now it is part of physics.

If, indeed, physical explanations are formulated for the relationships Dean envisions being discovered in the future, astrological terminology will become superfluous, just as the caloric-fluid explanation was rendered unnecessary by atomic theory and statistical mechanics.

Another possibility is that the research of the Gauquelins will not be absorbed into present-day science but will give birth, as the Gauquelins themselves believe, to a new science. The phenomena would be explained in scientific terms and the astrological symbolism would become redundant. No good theoretical or practical reasons would exist to describe the phenomena in astrological terms. These theories would be more than adequate by themselves. If we can provide all the needed explanations without resorting to astrological symbolism, why add it?

Assuming the validity of the Gauquelins' work, these seem more likely possibilities than the astrological one Dean envisions. For, as Dean himself points out (p. 238), the predictions of the Gauquelins and those of astrologers are of a different nature. And on page 237, he tells us: "The essential difference between what Gauquelin discovered and what astrologers study is that Gauquelin is speaking of statistical probabilities in their predictions or character analyses. For most astrologers, the world operates on the principle of synchronicity, not chance. ... [That is] everything which occurs at a given moment is connected through the various qualities of consciousness, time, and space at that instant." (See also pp. 60-61.) This is indeed a big difference! And the Gauquelins are interested in providing *physical* explanations of their correlations, not astrological or occult explanations. But Dean likes to think of it all as astrology anyway. He seems to be as attached to that word as the rest of us are to "apple pie" and "motherhood." He is led to view astrology in a broadly conceived self-indulgent way, so that *by definition* his label will apply to *whatever* celestial-terrestrial relations are discovered in the future. Dean argues that the *general idea* of astrology is correct but that present-day astrologers do not have adequate methods for the discovery and interpretation of planetary influences (pp. 57, 110, 272). This general idea is nowhere clearly defined. But his lax, self-indulgent approach to astrology allows him to claim that research on season of birth, climate, weather, solar radiation, and cycles are encapsulated in "astrology" (p. 110).

What is most annoying about this book is the use of all sorts of questionable devices and logical fallacies to promote the cause of astrology. Examples are

abundant. They include ad hominems intended to appeal to popular sentiment: "It should be made clear that most contributors to this attack on astrology are avowed atheists" (p. 149); and unsubstantiated statements: "It is worth remembering that a growing number of psychiatrists are becoming interested in using astrology as an aid to understanding their patients" (p. 166). He makes misleading statements: "Psychologists are slowly becoming aware of a growing number of studies which have obtained positive results for astrological hypotheses" (p. 205). Of twenty articles on astrology that have been published in prominent psychological journals since 1977, only five reported positive results; and there is strong evidence that three of these, which deal with an extroversion-introversion zodiac relationship, were based on artifacts! [See "Alternative Explanations in Science" by Kelly and Saklofske, pp. 33-37 of this issue.]

Another device used by Dean is the presentation of unverifiable information: He refers to an astrologer who claims to work with psychologists and psychiatrists who, unfortunately, are unwilling to speak openly about it. Also, Dean cites an interview with a New York astrologer who contends that astrology was used as a tactical weapon by the Pentagon during the Vietnam war. Alas, no names are forthcoming, because the information is confidential (pp. 173, 225). Dean is also prone to make faulty analogies: He compares the predictions of weather forecasters with those of astrologers. Both, he says, must utilize data that are complex and difficult to interpret, and consequently they both make mistakes. But the two situations are not sufficiently similar to allow comparison. Dean overlooks significant differences in the compared cases, thereby leading the reader to questionable conclusions. In contrast to astrologers, weather forecasters know the kind of information needed to improve *their* predictions. On the other hand, the data of the astrologers—the movements of the planets—are already known with incredible accuracy. Also, the basis of meteorology is well-integrated with physics and the other sciences. It is a very different matter with astrology!

Dean also resorts to begging the question: "The discovery of planetary influences must surely rank as one of the major scientific monuments of our century," (p. 271). Even if the planets did exert an ever-so-subtle influence at the time of an individual's birth, no one could seriously believe that the influence of the planets is important when compared with the much stronger social and physical environmental forces on earth that directly affect our lives. He makes appeals to pity: "It is clear that in many fields, individuals have been discouraged, silenced, and held back from investigating possible correlations between earthly events and celestial phenomena" (pp. 334-35). Well, perhaps, but several dozen articles on astrology have been published in psychology journals alone over the past decade, and the findings of over thirty experimental studies examining moon-phase and human behavior have been published in a variety of academic journals. For fringe areas this is pretty good. He draws ridiculous caricatures of astrology's critics: "Shall we believe the astronomers, who believe that their telescopes have not detected any influences from the planets, even though their telescopes were not built to search for such influences?" (p. 47). He states completely unsupportable opinions as facts: "Economic cycles will only be controlled when it is accepted that they are a response to cosmic conditions. Cycles of war will only cease when man realizes that periodic planetary configurations impel nations to aggressive behavior" (p. 272).

He describes poorly conducted research as if it were reliable and valid: Dean

describes "Astro*carto*graphy" maps as "among the most interesting new techniques in astrology, [one] which promises to permit much more accurate forecasting in terms of geographic locations" (p. 315). This technique, developed by the astrologer Jim Lewis, connects all the places on earth where the planets are "seen" on the horizon at the time of one's birth. Lewis calculated the maps for various U.S. presidents and found that the planetary lines had relationships with important events in their lives. Given the number of lines to choose from it is not surprising one can find all sorts of matches. Also, since no controls were utilized, this after-the-fact juggling is worthless. No evidence is provided that maps based on accurate birth data are more accurate than those based on spurious birth data. *Before* this kind of an experiment is conducted one would have to determine what events are important in that individual's life and what planetary lines at what places would and would not confirm the hypothesis.

Dean also refers to a new type of astrology, developed by a group of French astrologers, which involves a plot of the angles between the outermost planets, their arcs, and rates of change in those arcs over time. These astrologers argue that peaks, troughs, and rates of increase or decrease in the resulting graphs are related to significant events in history. The problem here resides in the laxity regarding what are considered significant events. The astrologers have such a wide variety of events to choose from, it is easy to set up a match between their celestial occurrences and significant events. Peaks, troughs, and upturns and downturns in the graph are associated with such diverse occurrences as wars, invasions, economic crises, new political leaders taking over, scientific happenings, relations between countries, and so on. One strongly suspects that spurious graphs constructed on arbitrary data could be matched with such events too.

The frequency with which such problems occur in *The Astrology Game* and the damage done to the arguments contained therein cannot be overlooked in any assessment of the work. As such, aside from the chapters on the elements of astrology (Chapter 3), archaeoastrology (Chapter 6), and the research of the Gauquelins (Chapter 10), there is little here to recommend.

I would like to thank Rudi Krutzen for his helpful comments on this paper. •

UFOs and the Limits of Science. By Ronald D. Story. William Morrow, New York, 1981. 290 pp. $10.95.

Reviewed by Philip J. Klass

In Ronald D. Story's first book, *The Space-Gods Revealed*, published in 1976, he exposed the pseudoscience nonsense that had made Erich von Däniken both rich and famous. It was not the first (or in my opinion the best) exposé of the myth of

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"ancient astronauts." Story challenged von Däniken's claim that his ancient-extraterrestrial-visitors hypothesis was rejected by the "scientific establishment" because scientists are biased, stodgy, and unprepared to accept new concepts.

Story acknowledged that individual scientists are not infallible, but he correctly stressed that the "self-correcting feature of the scientific method is what makes it the valuable tool it is in our search for the truth."

By the time Story's first book made its appearance, popular acceptance of von Däniken's ideas had begun to fade, and so Story turned his attention to Unidentified Flying Objects and modern-day "UFOnauts"—not in his earlier role of a skeptic but as a would-be "UFO-believer." His newest book, *UFOs and the Limits of Science*, suggests to this reviewer that he has embraced, albeit unwittingly, von Däniken's modus operandi.

For example, in Story's new book (his second on the subject), he quotes from a study by a psychologist who concludes that "a goodly number of scientists are not only narrow-minded and dull, but also just stupid." And after citing several instances of scientists who manipulated their data, Story concludes: "Fabrication and fudging almost seems to be the order of the day in modern science." This provides Story with a comfortable rationale to explain why the scientific community is not impressed with the UFO evidence that he finds so impressive.

Although scientific methodology has shown its ability to cope with challenging mysteries ranging from subatomic particles to pulsars, Story says his book is intended "to demonstrate one overriding fact—namely, that science has its limits and can only go so far in explaining the UFO phenomenon at the present time. Ultimately, the subject is one that lies within the province of the *philosophy* of science." (Story holds a degree in philosophy.)

This is the common bond that links such diverse phenomena as UFOs, poltergeists, Sasquatches, N-rays, and "psychic phenomena." When their existence cannot be demonstrated using accepted scientific methodology, then clearly scientific methodology is fatally flawed and must be abandoned. But for philosophy?

In Story's first book, he debunked accounts of early "UFO contactees" who claimed to have met the occupants of flying saucers and, sometimes, to have taken a ride aboard a UFO. In demolishing von Däniken's claim that a sixteenth-century map could not possibly have been made without the use of aerial reconnaissance, Story noted that this wild tale was first advanced in 1960 by Donald Keyhoe, the founder of today's UFO movement. Story quoted, and seemingly endorsed, the observation by the late physicist Edward U. Condon, who headed a government-funded UFO study at the University of Colorado, that "by 1950 magazine and book publishers had discovered that money could be made in the UFO field."

But Condon does not fare well in Story's latest book. For example, in the book's introduction, written by astrophysicist and UFO proponent Thornton Page, Condon, the late astronomer Donald Menzel, and I are accused of a "pseudoscientific attempt to 'debunk' the whole UFO matter." (I am flattered to be listed with two such respected scientists whose international reputations are based on scientific achievements, not on UFO-related activities.)

The basis for Story's new book is a survey he conducted in the fall of 1979, spurred in part, he indicates, by my statement in my first book (*UFOs—Identified*) that "I have yet to meet a UFOrian who is willing to stake his case on one, two or even ten sightings."

Story writes that he "distributed a form letter in October, 1979, to about 90 leading 'UFOlogists' requesting their 'votes' for the one case (or more if no single case could be chosen) which to them represented 'the strongest UFO evidence on record.'" And what was the result? "I was rather amazed that nearly three-fourths (70 percent) of those contacted refused to take a stand with regard to any particular cases which to them might constitute the strongest evidence on record. And I was equally amazed by the lack of any consensus by those who did accept the challenge by offering their candidates for the then 'best' cases of all time," Story wrote.

This should strike anyone as curious, after more than one-third of a century, the many tens of thousands of UFO reports on record, and the hundreds of incidents that UFO proponents insist have been rigorously investigated and that they claim cannot possibly be explained in prosaic terms. But Story does not speculate or offer any hypotheses to explain this curious anomaly. And it is equally curious that a case that some experienced UFOlogists characterize as strong evidence is dismissed as weak by other, equally experienced UFOlogists.

Nevertheless, Story used the results of his survey to select 10 outstanding cases, of which, he assures the reader, "there are none stronger, in my judgment." Curiously his list does *not* include the Socorro, New Mexico, "landing/physical trace" incident of April 24, 1964. In the mid-1960s, UFOlogist Jacques Vallee made a similar survey of leading UFOlogists and the Socorro incident headed his list of outstanding cases. It had been investigated by J. Allen Hynek, then a UFO-consultant to the U.S. Air Force. After making two trips to Socorro, Hynek concluded that the egg-shaped object reported must have been some secret U.S. military craft. But the Air Force never was able to locate such a craft, nor has one of this description turned up in the subsequent 17 years. My own visit to Socorro suggested that the incident was a hoax, and I so indicated in my first UFO book published in 1968. Story admits that "many UFOlogists still consider the Socorro case a 'classic'... [but] there are far too many cases such as this in the sense that they are highly dubious, yet are uncritically accepted." (Ironically, UFOlogist Richard Greenwell, whom Story refers to in his book as his "colleague," was one of those who endorsed the Socorro case until he listened to my tape-recorded interviews with the principals.)

Another famous "landing/physical-trace" case that does not make Story's top-ten list is the one at Delphos, Kansas, which earlier was selected as the best case of 1971 by a blue-ribbon panel of experienced UFOlogists that included Hynek and James A. Harder, director of research for one of the nation's oldest UFO groups. This incident enjoyed wide acceptance by the UFO community until it was exposed as a hoax in 1975 by my book *UFOs Explained.* Although Story questions the credibility of the case, he omits any mention of its previous wide acceptance.

The internationally famous incident involving Betty and Barney Hill, in which Mrs. Hill insists the couple were abducted by UFOnauts, *is* included in Story's top-ten cases, but he rejects the abduction part of the incident. Story believes (as do the Hills' psychiatrist, Dr. Ben Simon, and I) that the couple did see a bright light in the night sky ("nocturnal light" type of UFO) during their drive through the White Mountains of New Hampshire. Yet if the abduction is fantasy, as Dr. Simon has publicly stated, the case becomes only one of many thousands of "nocturnal light" reports and hardly deserves inclusion in anyone's top-ten list.

Story rejects the explanation proposed by Robert Sheaffer (vice-chairman of CSICOP's UFO Subcommittee) that the UFO/bright light was the planet Jupiter,

which was especially bright on the night of September 19, 1961, at around 11 P.M. when the incident occurred. Story should re-read Mrs. Hill's account.

Betty Hill originally described the UFO as follows: "And there was a star down below the moon . . . I noticed that there was a star, a bigger star [i.e., UFO] up over this one. And it hadn't been there . . . And when I got to where I could see the star [UFO] again, I thought it had moved . . . even when it was coming in, it looked like a star." Sheaffer, trained in astronomy, found that there were indeed two bright "starlike" objects in close proximity to the moon that night: Saturn was the "bright star" below the moon, as Betty Hill reported, and Jupiter was above and to the left, near the moon, where Mrs. Hill said the UFO was located.

The fact that Story makes several references to *The UFO Handbook*, written by Allan Hendry, the chief investigator for Hynek's Center for UFO Studies, suggests that he is familiar with Hendry's excellent report of his personal investigation of more than 1,300 UFO incidents. On page 24, Hendry reports that nearly 28 percent of all UFO reports received by CUFOS turned out to be bright stars and planets.

Recalling Story's earlier criticism of von Däniken for "omission of so much relevant data," it is useful here to consider how he treats a classic UFO case on his top-ten list. The incident occurred at around 11 P.M., on the night of October 18, 1973, and involved a helicopter occupied by a pilot, Capt. Lawrence J. Coyne, and three other members of the Army Reserve, near Mansfield, Ohio. The incident was selected as the best case of 1973 by the same blue-ribbon panel that picked the Delphos incident two years earlier, and Coyne and his crew received a $5,000 prize from the tabloid *National Enquirer*.

While the helicopter was flying northeast at an altitude of 2,500 feet (above sea level) to return to its home base in Cleveland, a member of the crew spotted a red light to the east (where there are a number of radio/TV-station antennas with red warning lights). A short time later, it was concluded that the red light was moving at high speed toward the helicopter, prompting Coyne to put the helicopter into a steep descent to avoid a possible midair collision. Shortly before the object passed overhead, Coyne recalled, the altimeter read 1,700 feet. As the object passed overhead, the interior of the helicopter was bathed in green light. Then the object departed to the west and disappeared.

When Coyne next looked at his altimeter, he was surprised to discover that the helicopter was at 3,500 feet and climbing at 1,000 feet a minute, whereas it previously had been at 1,700 feet and was descending at the rate of at least 2,000 feet a minute. This seemed to suggest that some mysterious force left behind by the UFO was sucking the helicopter skyward, despite the fact that, according to Coyne's post-facto recollection, the helicopter controls were still set for a steep descent.

The first published account of the encounter appeared three days later in the October 21, 1973, issue of the *Cleveland Plain Dealer*, in an article written by Coyne's cousin, a reporter for the newspaper. Two weeks later, Coyne appeared on the Dick Cavett show, on the ABC-TV network, and recounted a similar story. Both reports included an account of another mysterious aftermath of the UFO encounter—an apparent blackout of radio communications that persisted for 6 to 10 minutes, making it impossible to contact the airport in Cleveland, Akron-Canton, Columbus, or Mansfield.

My own investigation into the incident revealed a simple explanation for the

difficulty in making radio contact with three of the airports—the helicopter was simply too far away at too low an altitude. I suggested to Coyne that he test my hypothesis on his next flight to Columbus, which he did; and he found that he could not reach them even on a "non-UFO" day. An equally prosaic explanation emerged for the inability to make contact with the nearby Mansfield airport.

A short time after Coyne ran this test, Hynek came to Cleveland to investigate the case. Based on Hynek's conclusion that the incident defied prosaic explanation, Coyne and his crew were awarded the $5,000 prize and became international UFO celebrities. In 1978, Coyne appeared before the United Nations to describe his UFO experience under the auspices of the island of Grenada, whose prime minister was a UFO believer.

In *UFOs Explained*, I proposed that the UFO was a meteor-fireball from the Orionid meteor shower, then near its peak activity. Orionid meteors come out of the east, as did the UFO, beginning around 11 P.M. local time, and closing at the reported time of the UFO encounter. I suggested that light from the fireball as it went over the helicopter would pass through the green-tinted windows above the cockpit, bathing it with the green light the crew recalled seeing. Its persistence for a second or two, because of the fireball's long, luminous tail, could lead the crew to the post-facto deduction that the object had stopped briefly over the helicopter.

Story rejects the fireball hypothesis on the basis of crew-member Robert Yanacsek's much later statement that the object "stopped for maybe 10 or 12 seconds." Story omits any mention of conflicting testimony found in the official report of the incident that the Coyne crew filed with the Army, whose accuracy was attested to by the signature of all four men, including Yanacsek. This official report, filed only a few weeks after the incident occurred, said that the object appeared "to hesitate momentarily over the helicopter."

Story claims that the object was in view "continuously for a period of *four to five minutes*" (emphasis in original). This conflicts with Coyne's account on ABC-TV, barely two weeks after the incident, when he said the total encounter was over "in about a minute's time." And Story's estimate of the encounter's duration also conflicts with what Coyne told United Press International barely two weeks after the incident. Coyne was quoted as saying: "It came from the horizon to our aircraft in about 10 seconds."

I proposed that the seemingly mysterious change from a steep descent to a moderate climb also had a prosaic explanation. When Coyne saw his altimeter reading 1,700 feet as he dived to avoid the UFO, his helicopter actually was only about 400 feet above the ground near Mansfield. The helicopter was descending at a rate of at least 2,000 feet a minute. If it escaped a collision with the UFO, the helicopter would crash into the ground within less than 12 seconds unless Coyne quickly pulled back the controls to pull the helicopter out of its dive.

The night was clear, visibility was good, and Coyne told me he could see the ground closing in fast. Is it reasonable to assume that, after the UFO had safely passed overhead and departed to the west, Coyne completely forgot to pull his helicopter out of its dive while he and the crew watched the departing UFO and then wasted precious seconds in talking about what it might have been—until Coyne finally remembered to look at the altimeter? If we believe that Coyne's recollections are 100 percent accurate, then his behavior as a pilot was deplorable.

I prefer the alternative explanation—that Coyne behaved exactly as any experienced pilot should have, instinctively (if absent-mindedly) pulling back the

controls to prevent crashing into the ground but that his recollection of those hectic moments was faulty. Is this an unreasonable alternative explanation?

In late 1975, a senior American Airlines pilot, Capt. Guy Ely, flying a jumbo-jet at 35,000 feet over Michigan, received a cryptic call from ground traffic control telling him to descend immediately. Captain Ely instantly recognized that this meant his aircraft was in danger of a midair collision, and so he put it into a steep descent, much as Coyne had done two years earlier to avoid a midair collision.

Later, when the National Transportation Safety Board held hearings to investigate the near miss, the American Airlines captain testified that he could "not remember the exact sequence of his observations and actions during the short time in which the traffic conflict materialized and was avoided." Is it unreasonable to conclude that Coyne, a far less experienced pilot than Captain Ely, might have similar difficulties in accurate recollection?

Story chooses to believe that Coyne's recollections are accurate and writes that he finds my explanation "more implausible than the presence that night of an alien spaceship." While Story acknowledges that "aircraft pilots have at times been fooled by meteors," he continues: "In a characteristically cavalier fashion, Klass argues that the skipper [Coyne] and his men were so frightened and confused by the sudden appearance of a bright meteor, that their time estimates and descriptions were wholly mistaken. Instead of a large, domed, metallic-looking cylinder (which all of the crew members said they saw *clearly* as it *stopped* above and ahead of them for ten or twelve seconds), Klass substitutes the lingering afterglow of a passing fireball... Klass *assumes* that the whole incident took only a fraction of the time the crew members claimed... I would think it more likely that men would lie than that four military men, trained to man a modern aircraft, would be so incompetent as to mistake a meteor for an object like the one described, and as to be incapable of remembering the difference between twenty seconds and four or five minutes."

On June 5, 1969, the experienced flight crews of an American Airlines plane, a United Air Lines plane, and an Air National Guard aircraft, flying in broad daylight, mistook a fireball and its fragments—at least 125 miles away—for a squadron of metallic craftlike objects that the flight crews believed posed a midair collision threat. And this misperception occurred in broad daylight, not in darkness as with the Coyne case. (See *UFOs Explained.*)

Story insists on the accuracy of recollections of the Coyne crew, but later in his book (p. 204), he acknowledges that "we must allow some room for human error, and UFO-witnesses' testimony is notoriously inaccurate, to be sure." And several pages later (p. 209) he cautions that "it may be a mistake to take all of these [UFO eyewitness] descriptions too literally." And on page 238 Story admits: "The problem is that human beings are not totally reliable or totally 'accurate' in their observations." But Story is unwilling to apply these caveats to Coyne and his crew.

Story acknowledges that "CUFOS investigator [Allan Hendry] did not *himself* expect that the vast majority of UFO witnesses would be *so* subjective and *so* unreliable as they proved to be." But Story adds that "it is simply illogical to reason that because *some* UFO percipients were mistaken on this or that occasion, *all* UFO witnesses must henceforth be deemed unreliable. I would think that the odds are highly in favor of there being at least *some* reliable testimony, especially among the 'hard-core' unexplained reports (e.g., in the present volume, my selection of the 'ten best cases')."

The fundamental problem involved is one addressed in my UFOlogical Princi-

ple #2: "Despite the intrinsic limitations of human perception when exposed to brief, unexpected and unusual events, some details recalled by the observer may be reasonably accurate. The problem facing the UFO investigator is to try to distinguish between those details that are accurate and those that are grossly inaccurate. This may be impossible until the true identity of the UFO can be determined, so that in some cases this poses an insoluble problem."

In the closing chapter of Story's latest book, he warns that "by now it should be clear that the 'scientific' study of the UFO phenomenon represents a real problem. First, the phenomenon does not manifest itself in such a way so as to make itself analyzable by science; that is, it is beyond the limits of science. And second, the practitioners of science, however eminent they may be, are as biased and emotional as the average person." Story goes on to say that to advance UFO research it may be necessary for scientists "to pursue new approaches, not normally undertaken in science, to meet the peculiar requirements of the UFO phenomenon."

Compare this with the closing paragraph of Story's first book debunking ancient astronauts, published only five years earlier: "If our planet is to survive, if social injustices are ever to be rectified, and if we are ever to have an ethical society, we must practice all forms of honesty. This includes distinguishing carefully between science and pseudoscience. Wild speculations in the guise of science and a collection of half-truths will only retard our progress." •

Arthur C. Clarke's Mysterious World. By Simon Welfare and John Fairley. A. & W. Publishers, New York, 1980. 217 pp. $17.95.

Reviewed by J. Richard Greenwell

Based on a British York Television production, this book deals with a wide range of anomalous phenomena of personal interest to Arthur C. Clarke, the well-known English science and science-fiction writer now living in Sri Lanka. Welfare and Fairley end each chapter with a brief comment by Clarke himself. While these are often noncommittal, Clarke, in his Foreword, states: "I have no disagreement with my colleagues on any major parts and have left their text entirely unchanged."

The topics covered in this book can be divided into four general areas: cryptozoology, physical phenomena (UFOs, Tunguska, and astronomical curiosities), true archaeological enigmas (as distinct from the "imbecile archaeology" of von Däniken and others), and general "fortean" phenomena.

The cryptozoological chapters address Bigfoot in the United States and the Soviet Union (where it is known as Almas), the Yeti, the giant squid and octopus, sea serpents, lake monsters reported in Canada, the United States, Scotland, and even Japan, and other, less well known topics, such as the "Loy's ape," giant South American snakes, and the Queensland (Australia) tiger. After reviewing the

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evidence for all the Bigfoot-type creatures, the authors conclude that "something seems to be there" and that they are "sure that the sea serpent will one day surrender a final proof of its existence." Clarke adds: "The game of hide-and-seek cannot last much longer."

The authors also take a positive stand on lake monsters, particularly Nessie, but they ask: "Could it [Nessie] have survived the freezing over of the lake in the last Ice Age?" Loch Ness and dozens of other lakes and fjords of western Scotland were carved out by glacial displacements and *subsequently* became lakes and fjords; their question, therefore, is inappropriate. Clarke states, "The evidence for *something* in the Loch is overwhelming," and on cryptozoology in general he concludes, "I have learned not to be skeptical about unlikely creatures."

Moving on to the physical phenomena, Welfare and Fairley's chapter on UFOs is treated lightly and poorly researched, relying heavily on a 1979 House of Lords debate arranged by Lord Clancarty, more popularly known as Brinsley LePoer Trench, the author of several books of the UFO and ancient-astronaut type. Here Clarke says that UFOs nevertheless represent a "serious and fascinating problem." Also, in the book's Introduction, he gives surprising support to serious UFO studies, concluding: "The idea that earth may have had visitors from space is a perfectly reasonable one." Although he personally doubts the extraterrestrial hypothesis, he states that UFOs, "despite all the nonsense that has been written about them, may yet turn out to be important and interesting."

The chapter on Tunguska is excellent and provides both a historical overview, particularly Leonid Kulik's pioneering efforts, and current hypotheses, with the comet one predominating. Clarke concurs. Ball lightning (inexplicably imbedded in the chapter entitled "Giants in the Earth") is given brief but appropriate treatment, as are astronomical curiosities in another chapter. Of particular interest here are the sections on the optical "discovery" (and repeated subsequent observations) of the planet Vulcan prior to the explanation of the perturbations of Mercury by general relativity, and Lowell's Martian canal network, which originated in his own perceptual system. Clarke calls the latter "the sad spectacle of a brilliant man, Percival Lowell, obsessed by an illusion." The Star of Bethlehem, the study of which is very fashionable these days, is also given some attention.

The chapters on archaeological enigmas are well researched and fairly straightforward. The stone monuments and circles of Britain, the crystal skulls of Mesoamerica, the giant balls of Costa Rica, the Baghdad battery, and the antikythera "computer" are reviewed in some detail, as are landscape drawings in Britain, California, and the Peru-Chile desert. Prehistoric Indian mounds in North America are unfortunately given little attention, and the authors fail to point out that, considering the labor required to build them, these mounds are far more impressive than the Eqyptian pyramids. An Indian mound in Ohio, for example, contains about 311,350 cubit feet of earth. Mounds at Poverty Point, Louisiana, contain 530,000 cubic *yards* of earth, and required over three million person-hours of labor. And the base of the Cahokia (Monk) Mound, in Illinois, is 200,000 square feet larger than Cheops, the biggest of all the Egyptian pyramids. Also, the number of American Indian mounds (over 100,000) is far greater than that of the Egyptian pyramids.

Perhaps the most amusing section of the book concerns the Cardiff Giant, a 10-foot "fossilized man" unearthed on a New York farm in 1869. Carved out of a gypsum block by an ingenious hoaxer named George Hull, who wanted to make a

fool out of a fundamentalist preacher, the Giant was the rage of New York, and P. T. Barnum displayed an exact replica of it. Before the hoax was revealed, it had "proved" that giants did once walk the earth. The authors should perhaps have mentioned the names of the learned authorities who examined the Cardiff Giant and proclaimed it to be authentic: James Hall, the director of the New York State Museum, called it "the most remarkable object yet brought to light in this country." Ralph Waldo Emerson declared the Giant as "very wonderful and undoubtedly ancient," and Oliver Wendell Holmes even drilled a hole behind the Giant's ear and described his intricate neural anatomy.

The most tedious chapter in the book, at least for me, is the one on fortean phenomena. I can read only so many reports of falling hazelnuts and falling frogs at one sitting. Clarke believes that "Charles Fort was on to something, but *what*, for Heaven's sake?" This chapter is rounded off by the "Devil's footprints" found in Devon in 1885.

In summary, the authors have undertaken a creditable effort to present a fairly balanced picture of most of the claims and counterclaims addressed in the book. They also are to be commended, in most instances, for consulting directly with the authorities involved, rather than simply relying on other published material. Some researchers knowledgeable in particular areas may find the treatment light and superficial (sometimes even dates are omitted), and Clarke's comments few and sometimes vague. On the other hand, they will be rewarded by the surprising inclusion of information as recent as the late 1970s (even some events from 1980 are mentioned), the high quality of the paper, and the excellent illustrations—many in color—throughout the volume.

We can end with some of Arthur C. Clarke's own comments: "Mysteries are *fun*. Even if they are only Nature's practical jokes, they add to our enjoyment of the marvelous universe around us." And while skeptics may not agree with some of the conclusions in the book, Clarke reminds us that "true wisdom lies in preserving the delicate balance between skepticism and credulity."

The book will be an indispensable addition to any library on anomalous phenomena, and I await with interest the parent television series when it is presented in this country. ●

Some Recent Books

Asimov, Isaac. *In the Beginning* ... New York: Crown, 1981, 234 pp., $10.95. A timely, line-by-line comparison of the biblical account of creation in the first eleven chapters of Genesis and the modern, scientific account of the origin and evolution of the universe. Asimov clearly delineates the vast differences between the two conceptions.

de Camp, L. Sprague. *The Ragged Edge of Science*. Owlswick Press, Box 8243, Philadelphia, PA 19101, 1980, 244 pp., $16.00. A collection of articles over the

past 30 years dealing with borderline science. Sections on the interactions of history, mythology, and archaeology; on occult and supernatural phenomena, cults, and movements; and on conflicts between science and pseudoscience.

Frazier, Kendrick. *Paranormal Borderlands of Science.* Buffalo, N.Y.: Prometheus Books, 1981, 469 pp., paper, $12.95. Collection of 47 articles from the first four years of the SKEPTICAL INQUIRER. Covers nearly every topic in fringe science and the paranormal.

Sheaffer, Robert. *The UFO Verdict: Examining the Evidence.* Buffalo, N.Y.: Prometheus Books, 1981, 242 pp., $15.95. Sheaffer, a superb skeptical investigator of UFO claims, critically examines a broad range of supposed UFO evidence, including the best photographs. His insights into the persons and groups who make up the modern UFO movement are also valuable. An important book, in the tradition of Klass's *UFO's Explained* and Hendry's *UFO Handbook.*

Wylie, Kenneth. *Bigfoot: A Personal Inquiry into a Phenomenon.* New York: Viking, 1980, 268 pp., $14.95. A long-needed dispassionate appraisal of the Bigfoot phenomenon by a historian, anthropologist, and amateur naturalist. Both a scientific investigation and a readable history of the quest for Bigfoot. Also a psychological study of the people who keep up the pursuit and their obsessions.

—K.F.

Articles of Note

Anderson, Jack. Syndicated newspaper columns of January 9 and February 5, 1981. Anderson's disclosures about the bizarre effort by a "psychic task-force" within the Pentagon to develop weapons based on ESP and voodoo. The second column gives skeptical, incredulous reactions to the believers' claims. The congressman-advocate of this effort is Congr. Charles Rose (D-N.C.), who seems to think ESP weaponry is within grasp, despite the absence of any satisfactory scientific proof that ESP even exists.

Balch, William R. "Testing the Validity of Astrology in Class." *Teaching of Psychology*, December 1980, pp. 247-250. Penn State-Altoona psychologist describes his tests of astrology with his students. He finds that such tests give the class a first-hand look at objective research methods and may be an effective way to address many students' predispositions toward nonscientific popular beliefs.

Brasch, Phyllis. "Final Refuge of False Hopes." *Parade*, January 11, 1981, pp. 15-16. Report on medical quackery and samples of health frauds at the National Museum of Medical Quackery in St. Louis.

Dixon, Bernard. "Questioning the Enquirer." *The Sciences*, January 1981, pp. 31-32. An inquiry into the distortions of a *National Enquirer* article headlined "Scientists on the Verge of Creating Plant People" shows how the tabloid cleverly

(but deceitfully) mixed in some cautious comments by a noted botanist to appear to lend authority to some wild speculations by three persons who didn't know what they were talking about.

"Evolution at the AAAS." *Science News*, January 10, 1981, p. 19. Report on the AAAS symposium on evolution and creationism. Letters of reaction are printed in the January 31 issue (pp. 67 and 75). *New Scientist* also had a similar report in its January 15 issue (pp. 128-29).

McBurney, Donald H. "The Persistence of Parapsychology." Paper presented at the annual meeting of the American Psychological Association, 1980. University of Pittsburgh psychologist gives six reasons for the continuing widespread belief in the alleged phenomena of parapsychology in the absence of "any convincing evidence that anything is going on that cannot be explained more parsimoniously by ordinary principles of science."

"Paranormal Pentagon." *Discover*, March 1981, p. 15. "Skeptical Eye" column focuses acerbically on the work, disclosed by columnist Jack Anderson, of the Defense Department's "psychic task-force" seeking ways to develop ESP weaponry.

Romey, William D. "Science as Fiction or Nonfiction?" *ETC.: A Review of General Semantics*, Fall 1980, p. 207. Essay on the ambiguities and misuses of the labels "fiction" and "nonfiction," with several references to the works of von Däniken, Velikovsky, and others.

Roszak, Theodore. "In Search of the Miraculous." *Harper's*, January 1981, pp. 54-62. A challenging, brilliant essay inquiring into the fact of modern society's "dabbling in a sort of higher gullibility, an assertive readiness to give all things astonishing, mind-boggling, and outrageous the chance to prove themselves true ... or true enough," and into the spiritual longings behind this circumstance. "In the depths of the psyche, a brutal politics of consciousness has been played out, which pits critical intellect against the innate human need for transcendence. Because both parties to the struggle are welded into the foundations of our full humanity, neither can finally be cast out." Should be read by every thoughtful person involved with these issues, regardless of one's point of view.

Schatzman, Morton. "Ghosts in the Machine." *Psychology Today*, January 1981, p. 99. More on this psychiatrist's tests of the nature of hallucinations.

Siegel, Ronald K. "Accounting for 'Afterlife' Experiences." *Psychology Today*, January 1981, pp. 64-75. UCLA psychologist's scientific look at the quasi-scientific evidence recently put forth on behalf of an afterlife. Concludes that reports of life-after-death experiences can now be understood as hallucinations based on stored images in the brain and triggered by the emotional and physiological processes involved in dying. The content of the imagery is greatly determined by cultural and personal expectations and attitudes.

Siegel, Ronald K. "The Psychology of Life After Death." *American Psychologist*, October 1980, pp. 911-931. A longer, more formal treatment of the subject presented in his *Psychology Today* article.

Singer, Barry, and Victor A. Benassi. "Occult Beliefs." *American Scientist*, January-February 1981, pp. 49-55. Discussion of the causes of occult belief, including media promotion, social uncertainty, cognitive biases, and the social psychology of belief in the occult.

—*K.F.*

From Our Readers

The letters column is a forum for views on matters raised in previous issues. Letters are welcome and are more likely to be published if they are typed and double-spaced. Some may have to be edited.

Editors and crank science

The singularly pertinent piece by Kendrick Frazier in the News and Comment column of your Winter 1980-81 issue asks "Where are the editors?" Robert Schadewald's article on the new perpetual-motion mania in the same issue describes some amusing instances that demonstrate why the question needs to be asked.

Perhaps one answer is that the editors of magazines featuring popularized science tend to have primarily journalistic backgrounds and lack scientific training or orientation.

This was particularly obvious in one instance. In *Popular Mechanics* for September 1961, an article appeared entitled "Engine with Built-in Wings." This was about what was, in effect, a levitation machine. It employed an inertia effect, involving reciprocating weights, to overcome gravity. Now you'd think that any intelligent person, particularly if employed by a magazine the public depended on for information, would be suspicious of claims for such a machine. But *Popular Mechanics* swallowed these particular claims whole. It even managed to lend them unwarranted credence: a photograph in the article showed a working model of the machine ostensibly in the act of levitating itself. Along with the machine, there were two men in the picture. One, the inventor, was bravely manning a rheostat. The other, the reporter who wrote the article, was passing a sheet of paper under the machine as if to establish that it was indeed clear of the floor.

I, and other readers, protested the article, the picture in particular. But the magazine never published a retraction or a correction. In fact, four months later a short statement was published to close the controversy. It backed up the inventor. After all, it said, he *did* have a patent.

Well, after months and years it must have become obvious to even the folks at *Popular Mechanics* that helicopters, cranes, and other such primitive lifting devices were not, after all, going to be outmoded. You'd think that there would have been some resentment or retaliation directed toward the reporter who contributed the embarrassing article. But, guess what? Instead, he was made the executive editor, a position he held for many years!

Warner Clements
Beverly Hills, Calif.

The Winter 1980-81 issue of the SKEPTICAL INQUIRER was excellent. Your comment on "Where are the editors?" hit a particularly responsive chord to my way of thinking. Your first example of this problem, the *Science Digest* article "Physicists Explain ESP," was a good case in point. When I read

that article I was irrepressibly drawn to the conclusion that the editors of *Science Digest* either were not conscious of the facts or were indifferent to them. I therefore wrote to *Science Digest* expressing my dissatisfaction with the article. No response has been forthcoming; nor to the best of my knowledge has my letter or any other letter critical of this article appeared in *Science Digest*.

The SKEPTICAL INQUIRER stands in sharp contrast to magazines like *SD*, both in its editorial selection and evaluation and its fair (at times more then fair) handling of letters and articles critical of *SI* and CSICOP.

Michael R. Dennett
Seattle, Wash.

Exploring the universe

For some time now, scientists have been distraught at the growth of astrology-related materials in newspapers in the United States. Unfortunately, there has not been a corresponding increase in the amount of clear, reliable science reporting available to most readers. Recently, however, a new series of astronomy articles written by scientists, which has been running successfully in San Francisco area papers, has become available for general distribution in the United States and Canada.

Called "Exploring the Universe," the weekly series is not a routine guide to the naked-eye sky (as can sometimes be found buried among weather reports in many papers); rather, the column deals with current concepts and discoveries in the field of astronomy.

Each article is about 500 words and presents a single idea without the use of jargon or mathematics. However, each column is written either by a research astronomer or a science educator and is carefully edited, not just for readable style but also for scientific accuracy. A sampling of the titles will give you an idea of the flavor of the series: "The Search for Black Holes," "Volcanoes on Other Worlds," "Searching for Antimatter by Balloon," "The Zodiac Isn't What It Used to Be" (on astrology), "Cloudshine and Moonshine" (on the discovery of molecular alcohol in interstellar clouds), "The Largest Object in the Universe," and "What Were the Atoms in Your Body Doing 8 Billion Years Ago?"

The project carries the endorsement of the Task Group on Education in Astronomy of the American Astronomical Society and is sponsored by the Astronomical Society of the Pacific, an international nonprofit educational and scientific organization.

At the present time, the series is featured in about ten North American newspapers. We would very much like to solicit the assistance of interested SKEPTICAL INQUIRER readers in placing the series in other newspapers.

In general, editors are most likely to pay attention if they receive a letter from someone in the local community. We will be happy to send an information packet (which includes sample columns) to anyone who is willing to write to the editor of their local paper. Please include the name of the paper in your letter to us.

Andrew Fraknoi
The Astronomical Society
of the Pacific
1290 24th Avenue
San Francisco, CA 94122

Belief among psychology students

I want to raise an objection to Singer and Benassi's interpretation of their data on psychic belief ("Fooling Some of the People All of the Time," *SI*, Winter 1980-81). The authors found that widespread (>50%) belief in the psychic powers of a magician persisted in the face of instruction and logic to the contrary. Singer and Benassi profess surprise at this high rate and reject two

alternative explanations, i.e. "the students are kidding the experimenters" and "in California they will believe anything."

They go on to commit a fallacy by generalizing their results from psychology students (the subjects) to students in general, and even to people in general. In my opinion, they leave out a very likely hypothesis, namely, that belief in psychic powers is especially strong among beginning psychology students. I suggest that the sort of person to enroll in a psychology course is concerned with the workings of mind and emotion and predisposed to belief in mind bending metal. In fact, considering the wide variety of therapies claimed to be effective without much objective evidence of their success, I wonder if (some) psychologists are not members of an especially credulous profession. Had Singer and Benassi chosen students from more fact-oriented fields, they might have found lower (or higher?) proportions of believers.

Wolf Roder
Dept. of Geography
University of Cincinnati
Cincinnati, O.

Barry Singer and Victor Benassi ask: "Why do many people attribute occult powers to charlatans who perform old-hat magic tricks and label them 'psychic'?" They go on to say that "any magicians worth their salt could not only perform these stunts, they could levitate bevies of assistants with a wave of the hand or dematerialize whole elephants onstage."

May I suggest that one reason is that magicians who levitate assistants and dematerialize elephants don't explain *how* they do such things; there are some inquiring minds that are skeptical about anything that is not explained to them. The most effective refutation of a phony psychic I can think of is to have a good magician first duplicate his most amazing feats, then explain in detail how he did so, and finally duplicate them again while explaining exactly what he is doing as he goes along; anything less is liable to leave some people with the impression that the magician is really a psychic rather than the other way around.

T. H. Graf
Washington, D.C.

Parapsychology Ph.D.

In your story, "Psi science Ph.D.: The rocky road" (News and Comment, Winter 1980-81), you repeat some of the serious factual errors from the October 1980 issue of *Psychology Today*. The most serious errors relate to the actions taken by my academic committees—which are inaccurately, and unfairly, presented in your article.

This seems to be a violation of the very principles of tough-minded and skeptical editing elucidated by yourself in the first article of the same issue—particularly insofar as you had been notified that errors did occur. Apparently, your tough-mindedness softens when it comes to being skeptical of the "skeptics."

Regarding the outcome of my doctoral program, there is no cloud hovering over my degree in parapsychology. My dissertation was unanimously approved by the five members of my academic committee at Berkeley, and subsequently approved by the dean of the Graduate Division. All of the June 1980 degrees, including my own, were retroactively approved by the Board of Regents of the University of California in August 1980. Thus, there was no reason for you (or *Psychology Today*) to imply that there were any uncertainties regarding my degree.

I would like to inform readers who are interested in the actual nature of my research in experiential ESP education that my dissertation will be published this year by McFarland and Company

of Jefferson, North Carolina. Although the dissertation is favorable toward scientific parapsychology, it does contain a critique of fraud and deception in popular training programs such as Silva Mind Control, Scientology, and the Rosicrucians (AMORC), In particular, there is a detailed critique of the fraudulent claims of the Transcendental Meditation Siddhis Program—in which thousands of individuals have been led to believe that they are actually levitating.

Jeffrey Mishlove
Core Faculty, Parapsychology
John F. Kennedy Univ.
Orinda, Calif.

Kendrick Frazier responds:

Before preparing my account of the substance of the Psychology Today *article, I had obtained copies of both Dr. Mishlove's complaints about the article and the response and rebuttal to those complaints by the author of the article, Berkeley Rice. I was satisfied that the article was accurate in all important aspects. We are happy to publish Mishlove's updated information about the Regents' approval of his degree.*

By trust possessed

You ought to know better than to believe what you read in the *Midnight/Globe*!

In the Psychic Vibrations column in your Winter 1980-81 issue, you cite this learned journal (which competes with several other tabloids for the distinction of being "the poor man's *National Enquirer*") as quoting me on our "function as sexual beings long after we have died." Naturally, I didn't say any such thing. What you did was to trust such a source and not go back to the introduction I wrote for the anthology *By Lust Possessed*, which I concluded with ringing "reaffirmation of the pleasures of sexuality among us, the living."

Using the *Midnight/Globe* as a source, you must have picked up the mistake that *By Lust Possessed* was edited by R. DeWitt Miller, who has been dead for years. Or do you assume Miller compiles anthologies from the Spirit World? Credit for editing this unique book goes to Eric Lombard, who also had the good sense to let me write a half-learned and half-amused introduction, with which you could quarrel only if your sense of humor had deserted you totally.

The *Midnight/Globe* has done other things to me, but there is no use trying to correct any of these sheets. On April 17, 1979, they ran a story under the headline "Psychic Reveals Shock Evidence of Reincarnation." Guess who the psychic was supposed to be? Me, I, Yours Truly. Well, I am not now, nor have I ever been, a psychic. They also wrote that my "shock evidence" came from the "soon-to-be-released" book *Reincarnation in the Twentieth Century*. Trouble was, the book had actually been published back in 1969.

Martin Ebon
New York, N.Y.

Robert Sheaffer responds:

The quotation to which Mr. Ebon objects was not from the Globe's *account of the preface but was reportedly given directly to the* Globe *by Ebon. In such an instance, it is his word against theirs. While I have found that in many instances far-out quotes published in tabloids are more accurate than the quotees like to acknowledge, in other instances they are not; so I must give Ebon the benefit of the doubt.*

A question for UFO "believers"

Psychologists Padgett, Benassi, and Singer have discussed the question, Why do the majority of people believe

in ESP? (*SI*, Fall 1980, pp. 47-48). A parallel question deserving similar scrutiny is, Why do most people believe, or profess to believe, in the existence of UFOs?

"Can 15 million Americans be wrong?" asks a cover blurb on several paperback UFO books. The reference is to the number of Americans who claimed that they had seen a UFO, according to a 1973 Gallup Poll.

Implicit in such a rhetorical question is the assumption that people ordinarily desire to be "right"—which is to say *truthful*, in accordance with knowledge and reason, and correct in thought and statement.

But is that a reasonable assumption? Are people generally interested in understanding and promoting truth (as against beliefs, opinions, and strategies)? UFO enthusiasts never stop to contemplate this question. If they did, they might come to realize that the desire for truth is not at all self-evident and that, as an old Roman saying has it, "People want to be deceived."

Ironically, a similar view has been expressed even by flying-saucer proponent Stanton T. Friedman. In a 1977 interview, Friedman stated his opinion that "most people aren't motivated by the search for truth" but "by looking after themselves, whether it's an ego stroke that they want, or power, money, whatever." Nor are the UFO groups and hobby clubs interested primarily in the search for truth; "What they are looking for is something else," said Friedman (*Official UFO*, May 1977, p. 47). Doubtless this is one of the few propositions on which Friedman and UFO skeptics will agree.

Perhaps Americans believe in UFOs just because it is fun and requires no thought whatever and no corresponding change in their daily lives. As for this American, I agree with *Chicago Sun-Times* columnist Roger Simon, who suggested that "Anyone who believes in UFOs deserves to."

David A. Schroth
St. Louis, Mo.

A "thank you" to Randi

I saw "The Amazing" Randi on the television show "That's My Line" on February 24 and had to write to say thanks, Randi! This was the first time I had seen Randi's famous $10,000 challenge in action. It was exciting. Randi's challenge is a dare to all those pseudo-psychics out there to see if they can out-think Randi et al. The eternal worry, of course, is that someone will come up with a clever new trick and appear to have won. But Randi zapped that "Shao-Lin" phony on prime time. Host Bob Barker seemed to view it, as did the parapsychologist, as a failed demonstration, rather than as the unveiling of a fraud. They say you can't prove a negative. But Randi keeps plugging away, and he has my support. Keep up the good work.

Michael McCarthy
San Lorenzo, Calif.

See Randi's article on this confrontation in this issue.—ED.

The Committee for the Scientific Investigation of Claims of the Paranormal

Paul Kurtz, Chairman

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The Committee for the Scientific Investigation of Claims of the Paranormal

The Committee for the Scientific Investigation of Claims of the Paranormal attempts to encourage the critical investigation of paranormal and fringe-science claims from a responsible, scientific point of view and to disseminate factual information about the results of such inquiries to the scientific community and the public. To carry out these objectives the Committee:

- Maintains a network of people interested in critically examining claims of the paranormal.
- Prepares bibliographies of published materials that carefully examine such claims.
- Encourages and commissions research by objective and impartial inquiry in areas where it is needed.
- Convenes conferences and meetings.
- Publishes articles, monographs, and books that examine claims of the paranormal.
- Does not reject claims on a priori grounds, antecedent to inquiry, but rather examines them objectively and carefully.

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